

above ground storage tank  
air quality  
asbestos/lead-based paint  
baseline environmental assessment  
brownfield redevelopment  
building/infrastructure restoration  
caisson/piles  
coatings  
concrete  
construction materials services  
corrosion  
dewatering  
drilling  
due care analysis  
earth retention system  
environmental compliance  
environmental site assessment  
facility asset management  
failure analyses  
forensic engineering  
foundation engineering  
geodynamic/vibration  
geophysical survey  
geosynthetic  
greyfield redevelopment  
ground modification  
hydrogeologic evaluation  
industrial hygiene  
indoor air quality/mold  
instrumentation  
masonry/stone  
metals  
nondestructive testing  
pavement evaluation/design  
property condition assessment  
regulatory compliance  
remediation  
risk assessment  
roof system management  
sealants/waterproofing  
settlement analysis  
slope stability  
storm water management  
structural steel/welding  
underground storage tank

## **REPORT OF PHASE II ENVIRONMENTAL SITE ASSESSMENT**

### **FORMER BARRETT PAVING 511 SHEPHERD AVENUE LOCKLAND, OHIO**

**SME Project Number 063207.08  
July 27, 2012**

#### **Prepared for:**

Port of Greater Cincinnati Development Authority  
1014 Vine Street, Suite 1600  
Cincinnati, OH 45202

USEPA Cooperative Agreement: BF-00E00392-0



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**Soil and Materials Engineers, Inc.**

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS .....</b>	<b>1</b>
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.2 PURPOSE .....	2
<b>2.0 SCOPE OF ASSESSMENT .....</b>	<b>3</b>
<b>3.0 PROCEDURES .....</b>	<b>4</b>
3.1 SOIL SAMPLING .....	4
3.2 GROUNDWATER SAMPLING .....	5
3.3 AMBIENT AIR SAMPLING .....	5
3.3 CHEMICAL ANALYSES .....	5
3.4 SAMPLING QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) .....	6
<b>4.0 RESULTS .....</b>	<b>7</b>
4.1 SURFACE AND SUBSURFACE CONDITIONS .....	7
4.3 CHEMICAL ANALYSES RESULTS.....	8
4.3.1 <i>Soil Results</i> .....	8
4.3.2 <i>Groundwater Results</i> .....	8
4.3.3 <i>Ambient Air Results</i> .....	8
4.4 <i>Data Verification/Validation and Usability</i> .....	9
4.4.1 <i>Field QA/QC</i> .....	9
4.4.2 <i>Laboratory QA/QC</i> .....	9
4.4.3 <i>Project Objectives and Data Usability</i> .....	9
<b>5.0 FINDINGS AND RECOMMENDATIONS .....</b>	<b>10</b>

**Figures:** Figure 1 - Property Location Diagram  
Figure 2 - Soil and Groundwater Sample Location Diagram

**Tables:** Table 1 – Soil Analytical Results  
Table 2 – Groundwater Analytical Results  
Table 3 – Ambient Air Analytical Results

**Appendix A: Soil Boring Logs and Monitoring Well Construction Diagrams**  
**Appendix B: Laboratory Data Reports**

## 1.0 INTRODUCTION

Soil and Materials Engineers, Inc. (SME) prepared this report to present the results of a Phase II Environmental Site Assessment (ESA) of 511 Shepherd Avenue, in the Village of Lockland, Hamilton County, Ohio (the Property). The Property location is shown on Figure 1. The Phase II was funded by the Port of Greater Cincinnati Development Authority's (Port) United States Environmental Protection Agency (USEPA) Brownfields Assessment Grant for hazardous substances. SME conducted the assessment in accordance with SME's *Sampling and Analysis Plan* (SAP), dated March 22, 2012, and *Quality Assurance Project Plan* (QAPP), conditionally approved on August 18, 2011.

### **1.1 Property Description and Background**

SME completed a Phase I Environmental Site Assessment (ESA) of the Property in January 2012. At the time of SME's Property reconnaissance, the Property consisted of approximately 1.6 acres of land developed with an approximately 9,000 square foot, two story office building and two garages. The remainder of the Property was developed with paved parking, gravel-covered areas, and landscaped areas. The Property was located in a mixed use commercial/industrial/residential area. Based on SME's review of historical information, it appears the Property has been used for commercial purposes from 1950 through 2011.

Based on the results of the Phase I ESA, SME identified the potential for environmental impact associated with the following sources as recognized environmental conditions (RECs) in connection with the Property:

- Potential for environmental impact from former batch plant operations conducted on the Property. Operations included use of gasoline and diesel underground storage tanks (USTs); an oil/water separator; tar, asphalt, and fuel oil aboveground storage tanks (ASTs); a boiler house; truck scales; "chem carts"; and, a railroad spur, and, road equipment storage.
- Potential for environmental impact from migration of hazardous substances and/or petroleum products on to the Property associated with the following:
  - Former asphalt batch plant operations to the east and south.
  - Former operations conducted at GE and Pristine sites, located to the north and northeast.

### **1.2 Purpose**

SME designed the scope of this assessment to characterize current site conditions to support identification of environmental liability and safe use issues for the future Property owner. Specifically, the objectives of the assessment were designed to support the following:

- Support the User's all appropriate inquiry into environmental conditions of the Property, a component of the User's effort to qualify for one of the landowner liability protections to CERCLA applicable to the planned purchase of the Property.
- Evaluation whether environmental conditions warrant participation in the Ohio VAP and if so, to provide a basis for possible remediation.

SME prepared this report to document sampling and analysis procedures, and present assessment results and findings.

## 2.0 SCOPE OF ASSESSMENT

SME advanced five soil borings, installed three monitoring wells, and collected two ambient air samples at locations shown on Figure 2<sup>1</sup>. SME selected the sampling locations to assess the potential for environmental impact from the identified RECs. Soil samples were collected from each boring for visual classification, field screening, and laboratory analyses. Specific sampling objectives and their respective sampling locations are discussed in the following paragraphs.

The five soil borings were to be advanced to a depth of two feet below ground surface (bgs). However, during field investigation it was found that the asphalt paver base generally extended to two feet in most locations. As specified in the SAP, soil samples were to be taken in these areas, and the shallowest soil interval encountered below the paver base was selected for analysis. Three monitoring wells were installed five feet beyond the first encountered water-bearing units. In accordance with the SAP, one soil sample was collected from the 14-16 foot interval from MW3, near the location of the former USTs. An additional soil sample was collected from MW1 to assess a thick black substance encountered while drilling in the 2-4 foot interval. Ambient air samples were collected from the breathing zone (approximately 5 feet above ground surface) inside and outside of the building.

Soil samples collected from the borings were submitted for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and total petroleum hydrocarbons (TPH). Groundwater samples were analyzed for VOCs and PAHs. As there is no standard for TPH in groundwater, this analysis was not included. Ambient air samples were submitted for analysis of VOCs.

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<sup>1</sup> The ambient air sample locations are not shown. One was located inside the basement of the building while the other was outside the building near the center of the Property.

### 3.0 PROCEDURES

Procedures for the soil boring and sampling activities, groundwater monitoring well installation and sampling, equipment decontamination, and chemical analyses are summarized in the following subsections. SME completed the borings and collected soil, groundwater, and ambient air samples at the Property on July 11-13, 2012.

#### 3.1 Soil Sampling

Each soil boring was advanced using hollow stem auger and split spoon methods. The soil column in the samples was visually evaluated, and representative samples were collected from each soil unit for visual classification. SME visually classified the soil samples from the soil borings in general accordance with the Unified Soil Classification System (USCS).

A portion of each soil sample was used for field screening of ionizable VOCs using a calibrated photoionization detector (PID) equipped with a 10.6 eV lamp. Field screening consisted of placing a portion of the sample in a sealed plastic bag and allowing the sample to warm and release ionizable VOCs. The tip of the PID was inserted in the headspace of the bag, and PID readings were recorded on SME's field activity report.

The amount of soil collected at each sampling location was dependent on chemical analyses requirements. Samples intended for VOC and TPH GRO laboratory analyses were placed into pre-cleaned two ounce jars provided by the laboratory. Samples collected for analysis of PAHs and TPH DRO were placed into to pre-cleaned, eight-ounce, glass jars provided by the analytical laboratory. After the completion of sampling, SME filled the borings to ground surface with soil cuttings and bentonite chips.

### **3.2 Groundwater Sampling**

Groundwater was encountered at depths ranging from approximately 10 feet to 16.4 feet bgs at each boring location. SME installed groundwater monitoring wells at monitoring well locations MW1 through MW3. The wells were constructed of a ten-foot long, two-inch diameter, slotted (0.010 inch) PVC screen attached to two-inch diameter PVC riser, and a flush mount cover cemented in place. After gauging the depth to water and total well depth, SME developed using surge and purge techniques using a surge block and Whale® pump.

The following day after well development, SME purged the monitoring wells and then collected groundwater samples using polyethylene bailers equipped with low-flow spigots for VOC sampling. The groundwater samples intended for laboratory analyses were transferred directly into the following laboratory-supplied containers: 40-mL glass vials preserved with hydrochloric acid (VOC analyses), and one 1,000-mL, unpreserved, amber glass bottle (PAH analyses).

### **3.3 Ambient Air Sampling**

Ambient air samples were collected following USEPA Method TO-15 and SME SOP #26A, *Ambient Air Sampling and Analysis Using USEPA Method TO-15*. The 6-liter Summa® canisters were equipped with flow control orifices set to collect the samples over an 8-hour period. The canisters were mounted in the breathing zone, approximately 5 feet above the ground surface, for collection of the air samples.

### **3.3 Chemical Analyses**

SME collected and submitted seven soil, three groundwater, and two QA/QC samples to ALS Laboratory of Cincinnati, Ohio for analyses of VOCs, PAHs, and TPH. Two ambient air samples were submitted for analysis of VOCs. The chemical analysis parameters were selected to screen for hazardous constituents reasonably expected to be present based on the historical usage of the Property and potential for migration of contamination from off-site properties. The analytical methods for the sample analyses are as follows:

- VOCs – USEPA Method 8260 for soil and groundwater. TO-15 for air,
- PAHs – USEPA Method 8270.
- TPH – USEPA Method 8015M.

### **3.4 Sampling Quality Assurance and Quality Control (QA/QC)**

In order to minimize cross-contamination, a new pair of disposable nitrile sampling gloves was used for collection of each sample. Soil sampling equipment was decontaminated before each use with a laboratory grade detergent and rinsed with distilled water. Clean, un-used polyethylene/silicone tubing was used for groundwater purging and disposable bailers were used for sampling at the groundwater monitoring wells.

SME collected QA/QC samples in conformance with the requirements and specifications of the project SAP and QAPP. SME collected a groundwater field duplicate to evaluate the precision of sampling activities and a trip blank to evaluate the potential impacts of cross-contamination associated with sample storage and transport.

Field instrument calibration, sample handling and custody requirements, and laboratory analytical methods, analysis reporting limits (RLs), QA/QC procedures, and reporting protocols were consistent with those described in the project QAPP.

## 4.0 RESULTS

Results of the assessment activities, surface and subsurface conditions, and chemical analyses results are described in the following subsections.

### **4.1 Surface and Subsurface Conditions**

Soil samples were visually classified in general accordance with the USCS. Detailed information regarding the soil conditions encountered at each boring is documented in the Soil Boring Logs in Appendix A. The boring locations are shown on Figure 2. The surface and subsurface conditions encountered are summarized below.

The surface materials encountered at the boring locations consisted of one-half inch to four inches of asphalt. Asphalt paver base was encountered beneath the asphalt and extended to depths of 1.5 feet to 2.0 feet bgs. Black sand or clay fill was encountered beneath the paver base and extended to a depth of approximately 4 feet bgs. Sandy clay was encountered beneath the fill material to a depth of approximately 11 feet. Groundwater was encountered in a sand layer that generally extended from 10 to 17 feet bgs. Grey clay then followed to the termination of the borings.

Groundwater was initially encountered at depths ranging from approximately 10 feet to 16 feet below grade at the boring locations. Based on the calculated groundwater elevations, SME estimates that shallow groundwater at the Property flows toward the southeast. This is consistent with the results of other investigations conducted by SME in the Lockland area.

Odors, staining, and elevated PID readings were observed at boring locations MW1, SB1, SB2, and SB3 during sample collection and screening.

### **4.3 Chemical Analyses Results**

Results of chemical analyses performed on soil and groundwater samples are summarized in the following subsections. The soil and groundwater results were compared to VAP commercial/industrial standards promulgated in OAC§3645-300-08 to determine if the site exceeds acceptable risks for human health. The ambient air results were compared to Occupational Safety and Health Act (OSHA) Permissible Exposure Levels (PELs). The soil analytical results are presented on Table 1, the groundwater analytical results are presented on Table 2 and the ambient air results in Table 3. Laboratory analytical reports are included in Appendix B.

#### **4.3.1 Soil Results**

Several VOCs and PAHs were measured above laboratory reporting limits (RLs) in the soil samples collected from each location except MW3 (Table 1). No other target analytes were measured in samples collected from the point of compliance that exceeded the VAP commercial/industrial standards. The concentrations of TPH were below the soil saturation criteria for their soil type, glacial till.

#### **4.3.2 Groundwater Results**

Several VOCs and PAHs were measured above RLs in the groundwater samples collected from MW1 through MW3 (Table 2). Naphthalene, benzo(a)pyrene, and benzo(b)fluoranthene exceeded the Ohio unrestricted potable use standard.

#### **4.3.3 Ambient Air Results**

Only acetone was detected in the ambient air samples (Table 3.). It was detected in both samples. The concentration in the indoor air sample, IA1, was 47  $\mu\text{g}/\text{m}^3$  which is well below the OSHA PEL of 2,400,000  $\mu\text{g}/\text{m}^3$ .

#### **4.4 Data Verification/Validation and Usability**

SME evaluated the precision, accuracy, representativeness, completeness, comparability, and sensitivity parameters for the data collected during this Phase II ESA to determine if the data set was valid and of usable quality. Except as described below, results of quality control samples indicated that sample reproducibility and sampling and laboratory analysis functions were within acceptable limits. The laboratory QA/QC results are detailed in the Case Narrative included in Appendix B.

##### **4.4.1 Field QA/QC**

The concentrations of target analytes in field duplicate samples were within the field duplicate precision limits specified in the project QAPP. No VOCs were detected at concentrations greater than laboratory RLs in the trip blank, which indicates that contamination was not introduced during sample storage and shipment.

##### **4.4.2 Laboratory QA/QC**

With one exception, ALS reported that laboratory control spike/laboratory control spike duplicate (LCS/LCSD) analyses and calibration check verification (CCV) analyses were within acceptance limits. The recovery of the TPH surrogate could not be calculated due to the high levels of hydrocarbons present. The analysis of TPH is performed to assess aesthetic standards and not risk-based standards. As such, this QA/QC failure does not affect our decision as to the risks presented by the presence of chemicals of concern in soil at the Property.

##### **4.4.3 Project Objectives and Data Usability**

The data set generated is of usable quality and meets the Property-specific objectives.

## 5.0 FINDINGS AND RECOMMENDATIONS

While VOCs and PAHs were present in several soil samples, none of the impact was present within the commercial/industrial point of compliance in excess of the direct contact standards. The soil does not present a risk to future commercial workers at this Property. The ambient air sample showed no evidence that vapor intrusion presents a risk to future commercial workers. Monitoring well MW1 contained three chemicals that exceeded the unrestricted potable use standard. SME does not believe the presence of these chemicals in groundwater at the Property presents a risk to future receptors at the Property for the following reasons:

- Groundwater in the area is not considered drinking water,
- The groundwater yield of the upper saturated zone is too low to be useable as a potable water system,
- The Property is served by the Lockland Municipal water system and a potable water well is not needed.

The presence of these chemicals in MW1 should not present a future regulatory compliance issue for the Property or its owners for the following reasons:

- The Property owner has met the Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA) requirements of All Appropriate Inquiry and unless they exacerbate the problem, should be protected from federal liability and meet the definition of innocent landowner,
- The groundwater in this portion of Lockland is known by the USEPA and state as being impacted from the GE aviation plant. The source of this impact is only 1,500 feet north of the Property.
- The Property has been issued a No Further Action status by the Bureau of Underground Storage Tank Regulations (BUSTR) based on the levels of soil and groundwater impact at the Property.

The conclusions in this report are based on information obtained from the area of investigation only. The subsurface assessment was based on visual observations and chemical results. Should additional surface, subsurface, or chemical data become available after the date of issue of this report, the conclusions contained in this report may require modification after

SME has reviewed the additional information. This review by SME of additional information would be conducted upon receipt of a request from the client.

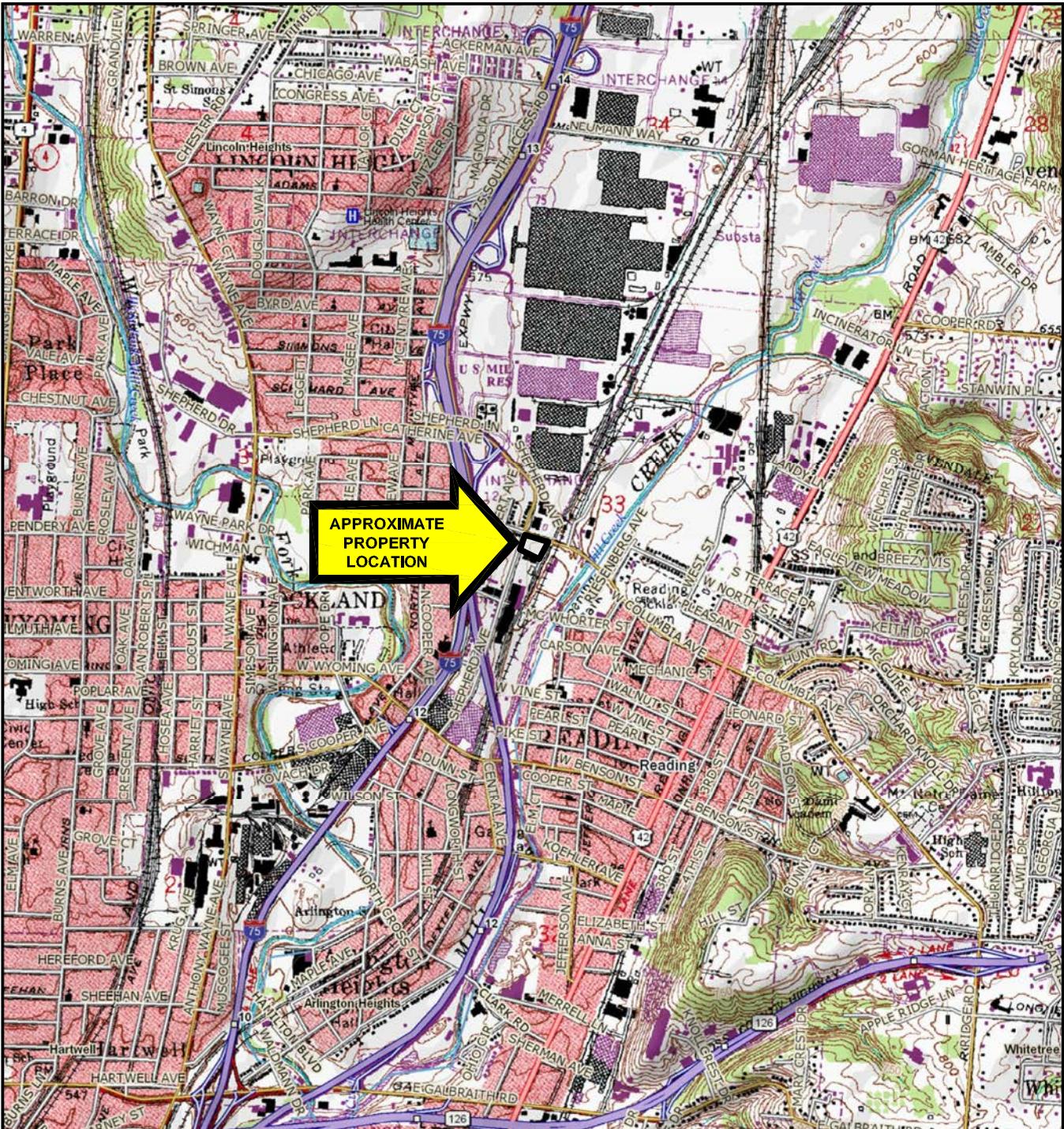
In the process of obtaining information in preparation of this report, procedures were followed that represent reasonable practices and principles in a manner consistent with that level of care and skill ordinarily exercised by members of this profession currently practicing under similar conditions.

Report prepared by: Steven A Reutter  
Report reviewed by: Keith B Egan, Ohio CP #259

## **FIGURES**

**Figure 1 – Property Location Diagram**

**Figure 2 – Soil and Groundwater Sample Location Diagram**



Base map obtained from © DeLorme Topo North America™ 9.



USGS QUADRANGLE(s) REFERENCED  
CINCINNATI EAST (OH) TOPO QUAD - 1988

SCALE: 1" = 2000'



Jun 07, 2012 - 1:06pm - MANDRILA

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**Indiana  
Michigan  
Ohio**

Date	06-06-12
Drawn By	GM
Scale	1" = 2000'
Project	063207.08.001

**USGS 7.5 MINUTE TOPOGRAPHIC MAP  
511 SHEPHERD  
LOCKLAND, OHIO**

Figure No. 1

No.	Revision Date



0' 50' 100'  
GRAPHIC SCALE: 1" = 50'

**SOIL AND GROUNDWATER  
SAMPLE LOCATION DIAGRAM  
FORMER BARRETT PAVING  
511 SHEPHERD  
LOCKLAND, OHIO**

Date	06-12-12
Drawn By	HJC
Designed By	RFM
Scale	1" = 50'
Project	063207.08.002

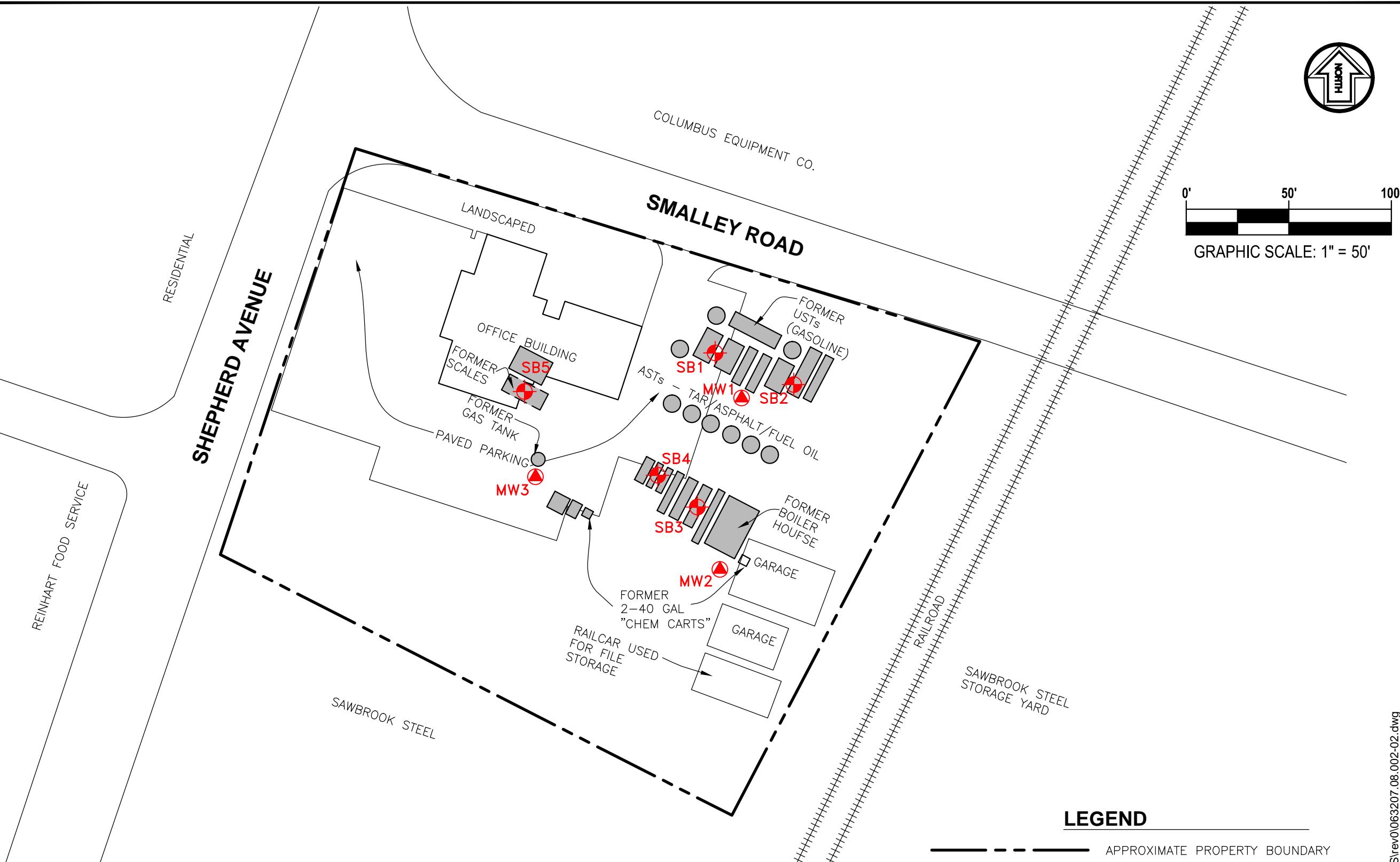
Indiana  
Michigan  
Ohio



Jul 27, 2012 - 9:34am - ceron  
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**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- MONITORING WELL
- SOIL BORING
- CURRENT FEATURES
- FORMER FEATURES



- NOTE:
1. DRAWING INFORMATION TAKEN FROM GOOGLE EARTH, PROPERTY RECONNAISSANCE, AND FROM 1981 CERTIFIED SANBORN MAP.
  2. PROPERTY FEATURES ARE NOT TO SCALE.

Figure No. 2

## **TABLES**

**Table 1 – Soil Analytical Results**

**Table 2 – Groundwater Analytical Results**

**Table 3 – Ambient Air Analytical Results**

**Table 1**  
**Summary of Soil Analytical Results**  
**Former Barrett Paving**

Chemicals of Concern	STANDARDS		Sample Location	RECOGNIZED ENVIRONMENTAL CONDITION - PROPERTY							RISKS			
	Commercial Worker			MW1	MW3	SB1	SB2	SB3	SB4	SB5	POC EPC	Commercial Worker Risk		
	Hazard Risk	Cancer Risk		Sample Depth (feet)	2-4	14-16	2-3	2-4	2-4	1.5-3.5		Hazard	Cancer	
				Sample Date	7/12/12	7/12/12	7/12/12	7/12/12	7/12/12	7/12/12				
<b>VOC (µg/kg)</b>														
1,2,4-Trimethylbenzene	1.2E+05	NS			<b>3,300</b>	<5.3	<690	<b>3,000</b>	<b>54,000</b>	<6.1	<6.2	3.1	2.6E-05	
2-Butanone	2.2E+07	NS			<1400	<5.3	<690	<680	<35000	<b>43</b>	<b>27</b>	27	1.2E-06	
Acetone	8.5E+08	NS			<1400	<5.3	<690	<b>700</b>	<35000	<b>170</b>	<b>110</b>	110	1.3E-07	
Naphthalene	2.8E+05	1.5E+05			<b>240,000</b>	<5.3	<b>63,000</b>	<b>2,600</b>	<b>5,700,000</b>	<b>32</b>	<6.2	3.1	1.1E-05	2.1E-05
p-Isopropyltoluene	2.2E+08	NS			<1400	<5.3	<690	<b>720</b>	<35000	<6.1	<6.2	3.1	1.4E-08	
sec-Butylbenzene	6.2E+07	NS			<1400	<5.3	<690	<680	<b>40,000</b>	<6.1	<6.2	3.1	5.0E-08	
Xylenes, Total	1.5E+06	NS			<1400	<5.3	<690	<680	<35000	<b>6.3</b>	<6.2	3.1	2.1E-06	
<b>PAHs (µg/kg)</b>														
1-Methylnaphthalene	6.6E+07	NS			<b>26,000</b>	<210	<b>82,000</b>	<b>5,300</b>	250,000	<240	<250	125	1.9E-06	
2-Methylnaphthalene	3.7E+06	NS			<b>33,000</b>	<210	<b>110,000</b>	<b>17,000</b>	500,000	<240	<250	125	3.4E-05	
Acenaphthene	5.6E+07	NS			<b>35,000</b>	<210	<b>39,000</b>	<430	79,000	<240	<250	125	2.2E-06	
Acenaphthylene	5.6E+07	NS			<1200	<210	<b>12,000</b>	<430	9,700	<240	<250	125	2.2E-06	
Anthracene	2.8E+08	NS			<b>62,000</b>	<210	<b>150,000</b>	<b>2,500</b>	97,000	<240	<250	125	4.5E-07	
Benzo(a)anthracene	NS	7.6E+03			<b>72,000</b>	<110	<b>200,000</b>	<b>2,500</b>	78,000	<b>240</b>	<130	125		1.6E-02
Benzo(a)pyrene	NS	7.7E+03			<b>63,000</b>	<210	<b>190,000</b>	<b>2,000</b>	59,000	<240	<250	125		1.6E-02
Benzo(b)fluoranthene	NS	7.7E+04			<b>64,000</b>	<210	<b>180,000</b>	<b>2,100</b>	60,000	<b>250</b>	<250	125		1.6E-03
Benzo(g,h,i)perylene	2.8E+07	NS			<b>30,000</b>	<210	<b>83,000</b>	<b>1,000</b>	14,000	<240	<250	125	4.5E-06	
Benzo(k)fluoranthene	NS	7.7E+05			<b>36,000</b>	<210	<b>56,000</b>	<b>1,700</b>	28,000	<240	<250	125		1.6E-04
Carbazole	NS	3.4E+06			<b>26,000</b>	<210	<b>69,000</b>	<430	34,000	<b>250</b>	<250	125		3.7E-05
Chrysene	NS	7.6E+06			<b>70,000</b>	<210	<b>200,000</b>	<b>2,300</b>	72,000	<b>250</b>	<250	125		1.6E-05
Dibenzo(a,h)anthracene	NS	7.7E+03			<b>11,000</b>	<210	<b>30,000</b>	<b>520</b>	7,000	<240	<250	125		1.6E-02
Dibenzofuran	NS	NS			<b>38,000</b>	<210	<b>98,000</b>	<430	190,000	<240	<250	125		
Fluoranthene	3.7E+07	NS			<b>240,000</b>	<210	<b>680,000</b>	<b>6,200</b>	290,000	<b>680</b>	<250	125	3.4E-06	
Fluorene	3.7E+07	NS			<b>55,000</b>	<210	<b>170,000</b>	<b>2,400</b>	180,000	<240	<250	125	3.4E-06	
Indeno(1,2,3-cd)pyrene	NS	7.7E+04			<b>29,000</b>	<110	<b>81,000</b>	<b>1,200</b>	24,000	<b>130</b>	<130	65		
Naphthalene	2.8E+05	1.5E+05			<b>87,000</b>	<210	<b>110,000</b>	<b>2,400</b>	1,300,000	<240	<250	125	4.5E-04	
Phenanthrene	2.8E+08	NS			<b>220,000</b>	<210	<b>730,000</b>	<b>8,600</b>	390,000	<b>650</b>	<250	125	4.5E-07	
Pyrene	2.8E+07	NS			<b>160,000</b>	<210	<b>490,000</b>	<b>5,700</b>	200,000	<b>490</b>	<250	125	4.5E-06	
<b>TPH (mg/kg)</b>	<b>Soil Saturation</b>													
TPH C6-C12	8.0E+03				NM	<2.1	<b>150</b>	<b>40</b>	<b>610</b>	<2.4	<2.5		NA	
TPH C10-C20	2.0E+03				NM	<16	<b>19000</b>	<b>9400</b>	<b>11000</b>	<18	<19		NA	
TPH C20-C34	4.0E+04				NM	<16	<b>6600</b>	<b>4600</b>	<b>7400</b>	<b>25</b>	<19		NA	
<b>TOTAL DIRECT CONTACT RISK IN POINT OF COMPLIANCE</b>												5.4E-04	5.1E-02	

Results in units shown.

Detected results shown in **BOLD**.

< - Not detected at listed detection limit.

NS - No Standard applicable to this chemical

NM - Not Measured.

NA - Not Applicable

Shaded results exceed standard

POC EPC - Point of Compliance Exposure Point Compliance

**Table 2**  
**Summary of Groundwater Results**  
**Former Barrett Paving**

Chemicals of Concern	Sample Location	MW-1	MW-2	MW-3
	Depth Collected (feet)	5-15	12-22	11-21
	Date Collected	7/13/2012	7/13/2012	7/13/2012
	Groundwater Standards			
<b>VOC (µg/L)</b>				
Acetone	14000	<b>12</b>	<5.0	<b>6.7</b>
Naphthalene	67	<b>530</b>	<5.0	<5.0
<b>PAH (µg/L)</b>				
1-Methylnaphthalene	1100	<b>110</b>	<0.12	<0.11
2-Methylnaphthalene	63	<b>97</b>	<0.12	<0.11
Acenaphthene	950	<b>28</b>	<0.12	<0.11
Anthracene	4700	<b>12</b>	<0.12	<0.11
Benzo(a)anthracene	0.63	<b>1.7</b>	<0.12	<0.11
Benzo(a)pyrene	0.2	<b>0.68</b>	<0.12	<0.11
Benzo(b)fluoranthene	0.46	<b>0.96</b>	<0.13	<0.12
Benzo(g,h,i)perylene	470	<b>0.26</b>	<0.12	<0.11
Benzo(k)fluoranthene	22	<b>0.38</b>	<0.19	<0.18
Carbazole	79	<b>64</b>	<0.12	<0.11
Chrysene	63	<b>1.8</b>	<0.12	<0.11
Dibenzofuran	NS	<b>25</b>	<0.12	<0.11
Fluoranthene	420	<b>19</b>	<0.12	<0.11
Fluorene	630	<b>29</b>	<0.12	<0.11
Indeno(1,2,3-cd)pyrene	0.34	<b>0.29</b>	<0.12	<0.11
Naphthalene	67	<b>440</b>	<b>0.24</b>	<b>1.9</b>
Phenanthrene	4700	45	<b>0.12</b>	<0.11
Pyrene	470	10	<0.12	<0.11

Notes: Results in units shown.

Detected results are in **BOLD**.

< - Not detected at listed detection limit.

Shaded results exceed standard.

**Table 3**  
**Ambient Air Analytical Results**  
**Former Barrett Paving**

Chemicals of Concern		REC		Statistics and Standards		
		Entire Property		Detections	Maximum Value	PEL
	Sample	IA1	OA1			
VOC ( $\mu\text{g}/\text{m}^3$ )						
Acetone		47	27	2	47	2.40E+06

Notes: Results in units shown.

Detected results shown in **BOLD**.

PEL - Permissible Exposure Level

**APPENDIX A**

**SOIL BORING LOGS**  
**AND**  
**MONITORING WELL CONSTRUCTION DIAGRAMS**



# soil and materials engineers, inc.

**PROJECT NAME:** FORMER BARRRET PAVING

A/E: BORING MW1

**PROJECT LOCATION:** CINCINNATI, OHIO

**START:** 07/12/2012

**END:** 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

**BY:** START: 07/12/20  
**PROJECT NUMBER:** 063207.08

SHEET: 1

**DRILLER:** EDP-JM

**WATER LEVEL DURING DRILLING:** 10'

**DRILL METHOD: DIRECT PUSH**

## **BACKFILL METHOD: SOIL CUTTINGS AND BENTONITE**



# soil and materials engineers, inc.

**PROJECT NAME:** FORMER BARRRET PAVING

**A/E:** BORING MW2

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:** START: 07/12/2012

**END:** 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

**PROJECT NUMBER:** 063207.08

**SHEET:** 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS
0		GROUND SURFACE ELEVATION= NOT SURVEYED					
1/2"	Asphalt Concrete						
8 Inches	Portland Cement Concrete						
5		Clay- Some Fine to Coarse Sand- Olive (CL)					
10							
15		Fine Sand- Brown- Wet at 16 Feet (SW)					
20							
22		Clay- Some Fine to Coarse Sand- Trace Gravel- Gray (CL) END OF BORING AT 22 FEET					
25							
30							
35							
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A MONITORING WELL SCREEN WAS INSTALLED FROM 12 TO 22 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED.					
GROUNDWATER ENCOUNTERED DURING DRILLING							
GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING							

DRILLER: EDP-JM

WATER LEVEL DURING DRILLING: 16'

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS AND BENTONITE



# soil and materials engineers, inc.

**PROJECT NAME:** FORMER BARRRET PAVING

**A/E:** BORING MW3

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:** START: 07/12/2012

**END:** 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

**PROJECT NUMBER:** 063207.08

**SHEET:** 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS	
0		GROUND SURFACE ELEVATION= NOT SURVEYED						
1/2"		1/2" of Asphalt Concrete	S1					
13 Inches		13 Inches of Asphalt Base						
5		Clay- Some Fine Sand- Dark Brown (CL/Fill)	S2	12	<1			
10		Sandy Clay- Trace Gravel- Brown (CL)	S3	10	0.2			
11		Clayey Fine to Coarse Sand- Trace Gravel- Brown- Moist at 8 Feet (SC)	S4	8	<1			
15		Fine to Coarse Sand- Trace Gravel- Tan- Wet at 16 Feet (SP)	S5	12	0.1			
16			S6	8	<1			
17			S7	12	<1			
18			S8	16	<1			
19			S9	18				
20		Clay- Trace Fine to Coarse Sand- Gray (CL)	S10	NR				
21		END OF BORING AT 21 FEET	S11	12				
25								
30								
35								
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A MONITORING WELL SCREEN WAS INSTALLED FROM 11 TO 21 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED.						
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING								

DRILLER: EDP-JM

WATER LEVEL DURING DRILLING: 16'

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS AND BENTONITE



# soil and materials engineers, inc.

**PROJECT NAME:** FORMER BARRRET PAVING

**A/E:** BORING SB1

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:** START: 07/12/2012

END: 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

**PROJECT NUMBER:** 063207.08

**SHEET:** 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS
0		GROUND SURFACE ELEVATION= NOT SURVEYED					
		2" of Asphalt Concrete	S1				
		22 Inches of Asphalt Base					
		Clay- Trace Gravel and Plywood- Oily- Black (CL/Fill)	S2	18	30.1	X	
		END OF BORING AT 4 FEET					
5							
10							
15							
20							
25							
30							
35							
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL.					
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING							

DRILLER: EDP-JM

WATER LEVEL DURING DRILLING:

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

**PROJECT NAME:** FORMER BARRRET PAVING

**A/E:** BORING SB2

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:** START: 07/12/2012

END: 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

**PROJECT NUMBER:** 063207.08

**SHEET:** 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS
0		GROUND SURFACE ELEVATION= NOT SURVEYED					
		\1" of Asphalt Concrete	S1				
		23 Inches of Asphalt Base					
		Clay- Some Fine to Coarse Sand- Petroleum Odor- Olive (CL)	S2	18	39.9	■	
5		END OF BORING AT 4 FEET					
10							
15							
20							
25							
30							
35							
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL.					
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING							

DRILLER: EDP-JM

WATER LEVEL DURING DRILLING:

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

**PROJECT NAME:** FORMER BARRRET PAVING

**A/E:** BORING SB3

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:** START: 07/12/2012

END: 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

**PROJECT NUMBER:** 063207.08

**SHEET:** 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS
0		GROUND SURFACE ELEVATION= NOT SURVEYED					
0		\1" of Asphalt Concrete	S1	NR			
		23 Inches of Asphalt Base					
		Fine to Coarse Sand and Gravel- Oily- Black (SP/Fill)	S2	18	61.2		
5		END OF BORING AT 4 FEET					
10							
15							
20							
25							
30							
35							
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL.					
GROUNDWATER ENCOUNTERED DURING DRILLING							
GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING							

DRILLER: EDP-JM

WATER LEVEL DURING DRILLING:

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

**PROJECT NAME:** FORMER BARRRET PAVING

**A/E:** BORING SB4

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:** START: 07/12/2012

END: 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

**PROJECT NUMBER:** 063207.08

**SHEET:** 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS
0		GROUND SURFACE ELEVATION= NOT SURVEYED					
		15 Inches of Asphalt Concrete	S1	NR			
		22.5 Inches of Asphalt Base	S2	16	<1	█	
		Clay- Trace Gravel- Olive Gray (CL/Fill)					
5		END OF BORING AT 4 FEET					
10							
15							
20							
25							
30							
35							
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL.					
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING							

DRILLER: EDP-JM

WATER LEVEL DURING DRILLING:

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

**PROJECT NAME:** FORMER BARRRET PAVING

**A/E:** BORING SB5

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:** START: 07/12/2012

END: 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

**PROJECT NUMBER:** 063207.08

**SHEET:** 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS	
0		GROUND SURFACE ELEVATION= NOT SURVEYED						
0	[Symbol: Asphalt Concrete]	2 Inches of Asphalt Concrete	S1	NR				
0	[Symbol: Asphalt Base]	16 Inches of Asphalt Base	S2	20	7.8	[Symbol: Bar]		
0	[Symbol: Gravel]	Clay- Trace Gravel- Olive Gray (CL/Fill)						
3.5		END OF BORING AT 3.5 FEET						
5								
10								
15								
20								
25								
30								
35								
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL.						
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING								

DRILLER: EDP-JM

WATER LEVEL DURING DRILLING:

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



**soil and materials engineers, inc.**

Monitoring Well

MW1

# **MONITORING WELL LOG**

## SME PROJECT No. 063207.08

**PROJECT NAME:** FORMER BARRRET PAVING

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:**

**DATE:** 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

ELEVATION (Ft.)	WELL DIAGRAM	DEPTH (Ft.)	PROFILE	PROFILE DESCRIPTION	WELL CONSTRUCTION DETAILS
				GROUND SURFACE ELEVATION IN FEET = NOT SURVEYED	
		0		1/2" of Asphalt Concrete	
				Asphalt Base	Top of Casing Elevation:
		5		Fine to Coarse Sand- Little Clay- Oil Saturated- Black (SP/Fill)	Well Screen Tip Elevation:
		10		Clay and Fine to Coarse Sand- Olive- Wet at 10 Feet (CL)	Borehole Diameter: 6" Filter Pack Type: #4 GLOBAL FILTER PACK
		15		Fine to Coarse Sand- Gray- Wet (SP)	Well Casing Diameter: 2" Length: Type: PVC Joint Type:
		20		END OF BORING AT 15 FEET	Well Screen Diameter: 2" Length: 10' Type: PVC Mesh: 0.010 Screen Plug (Y/N): Y
		25			Protective Casing Total Length: FLUSH MOUNT Length Above Ground: 0 Diameter: 6" Type: STEEL
		30			Well Cap Type: PLASTIC
		35			Northing: Easting:
WELL TYPE: MONITORING DRILLER: EDP-JM RIG NUMBER OR CONTRACTOR:		DRILLING METHOD: DIRECT PUSH GROUNDWATER DURING DRILLING GROUNDWATER AFTER DRILLING		<b>Notes:</b> 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A MONITORING WELL SCREEN WAS INSTALLED FROM 5 TO 15 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED 7-13-12.	
<b>WATER LEVEL DATA</b>					
DATE	DEPTH (Feet)	ELEVATION (Feet)			
	10' 4.5'				



**soil and materials engineers, inc.**

Monitoring Well

MW2

# **MONITORING WELL LOG**

## SME PROJECT No. 063207.08

**PROJECT NAME:** FORMER BARRRET PAVING

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:**

**DATE:** 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

ELEVATION (Ft.)	WELL DIAGRAM	DEPTH (Ft.)	PROFILE	PROFILE DESCRIPTION	WELL CONSTRUCTION DETAILS		
				GROUND SURFACE ELEVATION IN FEET = NOT SURVEYED			
		0		1/2" of Asphalt Concrete 8 Inches of Portland Cement Concrete			
		5		Clay- Some Fine to Coarse Sand- Olive (CL)			
		10					
		15		Fine Sand- Brown- Wet at 16 FEet (SW)			
		20					
		22		Clay- Some Fine to Coarse Sand- Trace Gravel- Gray (CL) END OF BORING AT 22 FEET			
		25					
		30					
		35					
<b>WELL TYPE:</b> MONITORING <b>DRILLER:</b> EDP-JM <b>RIG NUMBER OR</b> <b>CONTRACTOR:</b>		<b>DRILLING METHOD:</b> DIRECT PUSH GROUNDWATER DURING DRILLING GROUNDWATER AFTER DRILLING		<b>Notes:</b> 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A MONITORING WELL SCREEN WAS INSTALLED FROM 12 TO 22 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED 7-13-12.			
<b>WATER LEVEL DATA</b>							
<b>DATE</b>	<b>DEPTH (Feet)</b>	<b>ELEVATION (Feet)</b>					
	16' 16.4'						



**soil and materials engineers, inc.**

Monitoring Well

MW3

# **MONITORING WELL LOG**

## SME PROJECT No. 063207.08

**PROJECT NAME:** FORMER BARRRET PAVING

**PROJECT LOCATION:** CINCINNATI, OHIO

**BY:**

**DATE:** 07/12/2012

**CLIENT:** PORT AUTHORITY OF GREATER CINCINNATI

ELEVATION (Ft.)	WELL DIAGRAM	DEPTH (Ft.)	PROFILE	PROFILE DESCRIPTION	WELL CONSTRUCTION DETAILS
				GROUND SURFACE ELEVATION IN FEET = NOT SURVEYED	
		0		1/2" of Asphalt Concrete	
				13 Inches of Crushed Asphalt Base	
		5		Clay- Some Fine Sand- Dark Brown (CL/Fill)	
		10		Sandy Clay- Trace Gravel- Brown (CL)	
		15		Clayey Fine to Coarse Sand- Trace Gravel- Brown- Moist at 8 Feet (SC)	
		20		Fine to Coarse Sand- Trace Gravel- Tan- Wet at 16 Feet (SP)	
		25		Clay- Trace Fine to Coarse Sand- Gray (CL)	
		30		END OF BORING AT 21 FEET	
		35			
<b>WELL TYPE:</b> MONITORING <b>DRILLER:</b> EDP-JM <b>RIG NUMBER OR</b> <b>CONTRACTOR:</b>		<b>DRILLING METHOD:</b> DIRECT PUSH GROUNDWATER DURING DRILLING GROUNDWATER AFTER DRILLING		<b>Notes:</b> 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A MONITORING WELL SCREEN WAS INSTALLED FROM 11 TO 21 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED 7-13-12.	
<b>WATER LEVEL DATA</b>					
<b>DATE</b>	<b>DEPTH (Feet)</b>	<b>ELEVATION (Feet)</b>			
	16'				

**APPENDIX B**  
**LABORATORY DATA REPORTS**



26-Jul-2012

Keith Egan  
Soil and Materials Engineers  
One N. Commerce Park Drive, Suite 113  
Cincinnati, OH 45215

Tel: (513) 898-9430

Fax:

Re: Barret Paving; Project No.: 063207.08

Work Order: **1207300**

Dear Keith,

ALS Environmental received 14 samples on 13-Jul-2012 02:16 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 85.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

**Jim Baxter**

Electronically approved by: Leah Krazl

Jim Baxter  
Director

ADDRESS 4388 Glendale Milford Rd Cincinnati, Ohio 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

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RIGHT SOLUTIONS RIGHT PARTNER

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Work Order:** 1207300

**Case Narrative**

---

The analyses requested were analyzed according to Ohio Voluntary Action Program requirements.

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Work Order:** **1207300**

**Work Order Sample Summary**

<b>Lab Samp ID</b>	<b>Client Sample ID</b>	<b>Matrix</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>	<b>Hold</b>
1207300-01	IA-1	Air		7/12/2012 08:20	7/13/2012 14:16	<input type="checkbox"/>
1207300-02	OA-1	Air		7/12/2012 08:25	7/13/2012 14:16	<input type="checkbox"/>
1207300-03	SB1 2-3	Soil		7/12/2012 16:00	7/13/2012 14:16	<input type="checkbox"/>
1207300-04	SB2 2-4	Soil		7/12/2012 14:45	7/13/2012 14:16	<input type="checkbox"/>
1207300-05	SB3 2-4	Soil		7/12/2012 15:05	7/13/2012 14:16	<input type="checkbox"/>
1207300-06	SB4 2-4	Soil		7/12/2012 15:50	7/13/2012 14:16	<input type="checkbox"/>
1207300-07	SB5 1.5-3.5	Soil		7/12/2012 16:15	7/13/2012 14:16	<input type="checkbox"/>
1207300-08	MW3 14-16	Soil		7/12/2012 09:50	7/13/2012 14:16	<input type="checkbox"/>
1207300-09	MW1 2-4	Soil		7/12/2012 11:30	7/13/2012 14:16	<input type="checkbox"/>
1207300-10	DUP1	Water		7/13/2012	7/13/2012 14:16	<input type="checkbox"/>
1207300-11	MW1	Water		7/13/2012 10:00	7/13/2012 14:16	<input type="checkbox"/>
1207300-12	MW2	Water		7/13/2012 08:45	7/13/2012 14:16	<input type="checkbox"/>
1207300-13	MW3	Water		7/13/2012 09:30	7/13/2012 14:16	<input type="checkbox"/>
1207300-14	Trip Blank	Water		7/13/2012	7/13/2012 14:16	<input type="checkbox"/>

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** IA-1  
**Collection Date:** 7/12/2012 08:20 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-01  
**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>TO-15 BY GC/MS</b>						<b>ETO-15</b>
1,1,1-Trichloroethane	ND		10	ppbv	10	7/24/2012 11:44 PM
1,1,2,2-Tetrachloroethane	ND		10	ppbv	10	7/24/2012 11:44 PM
1,1,2-Trichloroethane	ND		10	ppbv	10	7/24/2012 11:44 PM
1,1-Dichloroethane	ND		10	ppbv	10	7/24/2012 11:44 PM
1,1-Dichloroethene	ND		10	ppbv	10	7/24/2012 11:44 PM
1,2,4-Trichlorobenzene	ND		20	ppbv	10	7/24/2012 11:44 PM
1,2,4-Trimethylbenzene	ND		10	ppbv	10	7/24/2012 11:44 PM
1,2-Dibromoethane	ND		10	ppbv	10	7/24/2012 11:44 PM
1,2-Dichlorobenzene	ND		10	ppbv	10	7/24/2012 11:44 PM
1,2-Dichloroethane	ND		10	ppbv	10	7/24/2012 11:44 PM
1,2-Dichloropropane	ND		10	ppbv	10	7/24/2012 11:44 PM
1,3,5-Trimethylbenzene	ND		10	ppbv	10	7/24/2012 11:44 PM
1,3-Butadiene	ND		10	ppbv	10	7/24/2012 11:44 PM
1,3-Dichlorobenzene	ND		10	ppbv	10	7/24/2012 11:44 PM
1,4-Dichlorobenzene	ND		10	ppbv	10	7/24/2012 11:44 PM
1,4-Dioxane	ND		10	ppbv	10	7/24/2012 11:44 PM
2-Butanone	ND		10	ppbv	10	7/24/2012 11:44 PM
2-Hexanone	ND		10	ppbv	10	7/24/2012 11:44 PM
2-Propanol	ND		10	ppbv	10	7/24/2012 11:44 PM
4-Ethyltoluene	ND		10	ppbv	10	7/24/2012 11:44 PM
4-Methyl-2-pentanone	ND		10	ppbv	10	7/24/2012 11:44 PM
<b>Acetone</b>	<b>20</b>	<b>10</b>	<b>ppbv</b>		10	7/24/2012 11:44 PM
Benzene	ND		10	ppbv	10	7/24/2012 11:44 PM
Benzyl chloride	ND		10	ppbv	10	7/24/2012 11:44 PM
Bromodichloromethane	ND		10	ppbv	10	7/24/2012 11:44 PM
Bromoform	ND		10	ppbv	10	7/24/2012 11:44 PM
Bromomethane	ND		10	ppbv	10	7/24/2012 11:44 PM
Carbon disulfide	ND		10	ppbv	10	7/24/2012 11:44 PM
Carbon tetrachloride	ND		10	ppbv	10	7/24/2012 11:44 PM
Chlorobenzene	ND		10	ppbv	10	7/24/2012 11:44 PM
Chloroethane	ND		10	ppbv	10	7/24/2012 11:44 PM
Chloroform	ND		10	ppbv	10	7/24/2012 11:44 PM
Chloromethane	ND		10	ppbv	10	7/24/2012 11:44 PM
cis-1,2-Dichloroethene	ND		10	ppbv	10	7/24/2012 11:44 PM
cis-1,3-Dichloropropene	ND		10	ppbv	10	7/24/2012 11:44 PM
Cumene	ND		10	ppbv	10	7/24/2012 11:44 PM
Cyclohexane	ND		10	ppbv	10	7/24/2012 11:44 PM
Dibromochloromethane	ND		10	ppbv	10	7/24/2012 11:44 PM
Dichlorodifluoromethane	ND		10	ppbv	10	7/24/2012 11:44 PM

**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** IA-1  
**Collection Date:** 7/12/2012 08:20 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-01  
**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		10	ppbv	10	7/24/2012 11:44 PM
Ethylbenzene	ND		10	ppbv	10	7/24/2012 11:44 PM
Freon 113	ND		10	ppbv	10	7/24/2012 11:44 PM
Freon 114	ND		10	ppbv	10	7/24/2012 11:44 PM
Heptane	ND		10	ppbv	10	7/24/2012 11:44 PM
Hexachlorobutadiene	ND		20	ppbv	10	7/24/2012 11:44 PM
Hexane	ND		10	ppbv	10	7/24/2012 11:44 PM
m,p-Xylene	ND		10	ppbv	10	7/24/2012 11:44 PM
Methylene chloride	ND		10	ppbv	10	7/24/2012 11:44 PM
MTBE	ND		10	ppbv	10	7/24/2012 11:44 PM
o-Xylene	ND		10	ppbv	10	7/24/2012 11:44 PM
Propene	ND		10	ppbv	10	7/24/2012 11:44 PM
Styrene	ND		10	ppbv	10	7/24/2012 11:44 PM
Tetrachloroethene	ND		10	ppbv	10	7/24/2012 11:44 PM
Tetrahydrofuran	ND		10	ppbv	10	7/24/2012 11:44 PM
Toluene	ND		10	ppbv	10	7/24/2012 11:44 PM
trans-1,2-Dichloroethene	ND		10	ppbv	10	7/24/2012 11:44 PM
trans-1,3-Dichloropropene	ND		10	ppbv	10	7/24/2012 11:44 PM
Trichloroethene	ND		4.0	ppbv	10	7/24/2012 11:44 PM
Trichlorofluoromethane	ND		10	ppbv	10	7/24/2012 11:44 PM
Vinyl acetate	ND		10	ppbv	10	7/24/2012 11:44 PM
Vinyl chloride	ND		10	ppbv	10	7/24/2012 11:44 PM
Surr: Bromofluorobenzene	99.0		60-140	%REC	10	7/24/2012 11:44 PM
<b>TO-15 BY GC/MS</b>			<b>ETO-15</b>			<b>Analyst: MRJ</b>
1,1,1-Trichloroethane	ND		55	µg/m³	10	7/24/2012 11:44 PM
1,1,2,2-Tetrachloroethane	ND		69	µg/m³	10	7/24/2012 11:44 PM
1,1,2-Trichloroethane	ND		55	µg/m³	10	7/24/2012 11:44 PM
1,1-Dichloroethane	ND		40	µg/m³	10	7/24/2012 11:44 PM
1,1-Dichloroethene	ND		40	µg/m³	10	7/24/2012 11:44 PM
1,2,4-Trichlorobenzene	ND		74	µg/m³	10	7/24/2012 11:44 PM
1,2,4-Trimethylbenzene	ND		49	µg/m³	10	7/24/2012 11:44 PM
1,2-Dibromoethane	ND		77	µg/m³	10	7/24/2012 11:44 PM
1,2-Dichlorobenzene	ND		60	µg/m³	10	7/24/2012 11:44 PM
1,2-Dichloroethane	ND		40	µg/m³	10	7/24/2012 11:44 PM
1,2-Dichloropropane	ND		46	µg/m³	10	7/24/2012 11:44 PM
1,3,5-Trimethylbenzene	ND		49	µg/m³	10	7/24/2012 11:44 PM
1,3-Butadiene	ND		22	µg/m³	10	7/24/2012 11:44 PM
1,3-Dichlorobenzene	ND		60	µg/m³	10	7/24/2012 11:44 PM
1,4-Dichlorobenzene	ND		60	µg/m³	10	7/24/2012 11:44 PM
1,4-Dioxane	ND		36	µg/m³	10	7/24/2012 11:44 PM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** IA-1  
**Collection Date:** 7/12/2012 08:20 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-01  
**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Butanone	ND		29	µg/m3	10	7/24/2012 11:44 PM
2-Hexanone	ND		41	µg/m3	10	7/24/2012 11:44 PM
2-Propanol	ND		25	µg/m3	10	7/24/2012 11:44 PM
4-Ethyltoluene	ND		49	µg/m3	10	7/24/2012 11:44 PM
4-Methyl-2-pentanone	ND		41	µg/m3	10	7/24/2012 11:44 PM
<b>Acetone</b>	<b>47</b>		<b>24</b>	<b>µg/m3</b>	10	7/24/2012 11:44 PM
Benzene	ND		32	µg/m3	10	7/24/2012 11:44 PM
Benzyl chloride	ND		52	µg/m3	10	7/24/2012 11:44 PM
Bromodichloromethane	ND		67	µg/m3	10	7/24/2012 11:44 PM
Bromoform	ND		100	µg/m3	10	7/24/2012 11:44 PM
Bromomethane	ND		39	µg/m3	10	7/24/2012 11:44 PM
Carbon disulfide	ND		31	µg/m3	10	7/24/2012 11:44 PM
Carbon tetrachloride	ND		63	µg/m3	10	7/24/2012 11:44 PM
Chlorobenzene	ND		46	µg/m3	10	7/24/2012 11:44 PM
Chloroethane	ND		26	µg/m3	10	7/24/2012 11:44 PM
Chloroform	ND		49	µg/m3	10	7/24/2012 11:44 PM
Chloromethane	ND		21	µg/m3	10	7/24/2012 11:44 PM
cis-1,2-Dichloroethene	ND		40	µg/m3	10	7/24/2012 11:44 PM
cis-1,3-Dichloropropene	ND		45	µg/m3	10	7/24/2012 11:44 PM
Cumene	ND		49	µg/m3	10	7/24/2012 11:44 PM
Cyclohexane	ND		34	µg/m3	10	7/24/2012 11:44 PM
Dibromochloromethane	ND		85	µg/m3	10	7/24/2012 11:44 PM
Dichlorodifluoromethane	ND		49	µg/m3	10	7/24/2012 11:44 PM
Ethyl acetate	ND		36	µg/m3	10	7/24/2012 11:44 PM
Ethylbenzene	ND		43	µg/m3	10	7/24/2012 11:44 PM
Freon 113	ND		77	µg/m3	10	7/24/2012 11:44 PM
Freon 114	ND		70	µg/m3	10	7/24/2012 11:44 PM
Heptane	ND		41	µg/m3	10	7/24/2012 11:44 PM
Hexachlorobutadiene	ND		220	µg/m3	10	7/24/2012 11:44 PM
Hexane	ND		35	µg/m3	10	7/24/2012 11:44 PM
m,p-Xylene	ND		43	µg/m3	10	7/24/2012 11:44 PM
Methylene chloride	ND		35	µg/m3	10	7/24/2012 11:44 PM
MTBE	ND		36	µg/m3	10	7/24/2012 11:44 PM
o-Xylene	ND		43	µg/m3	10	7/24/2012 11:44 PM
Propene	ND		17	µg/m3	10	7/24/2012 11:44 PM
Styrene	ND		43	µg/m3	10	7/24/2012 11:44 PM
Tetrachloroethene	ND		68	µg/m3	10	7/24/2012 11:44 PM
Tetrahydrofuran	ND		29	µg/m3	10	7/24/2012 11:44 PM
Toluene	ND		38	µg/m3	10	7/24/2012 11:44 PM
trans-1,2-Dichloroethene	ND		40	µg/m3	10	7/24/2012 11:44 PM

**Note:**

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** IA-1  
**Collection Date:** 7/12/2012 08:20 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-01  
**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
trans-1,3-Dichloropropene	ND		45	µg/m3	10	7/24/2012 11:44 PM
Trichloroethene	ND		21	µg/m3	10	7/24/2012 11:44 PM
Trichlorofluoromethane	ND		56	µg/m3	10	7/24/2012 11:44 PM
Vinyl acetate	ND		35	µg/m3	10	7/24/2012 11:44 PM
Vinyl chloride	ND		26	µg/m3	10	7/24/2012 11:44 PM
<i>Surr: Bromofluorobenzene</i>	99.0		60-140	%REC	10	7/24/2012 11:44 PM

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**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** OA-1  
**Collection Date:** 7/12/2012 08:25 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-02  
**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>TO-15 BY GC/MS</b>						
1,1,1-Trichloroethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,1,2,2-Tetrachloroethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,1,2-Trichloroethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,1-Dichloroethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,1-Dichloroethene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,2,4-Trichlorobenzene	ND		2.0	ppbv	1	7/25/2012 07:20 AM
1,2,4-Trimethylbenzene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,2-Dibromoethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,2-Dichlorobenzene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,2-Dichloroethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,2-Dichloropropane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,3,5-Trimethylbenzene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,3-Butadiene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,3-Dichlorobenzene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,4-Dichlorobenzene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
1,4-Dioxane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
2-Butanone	ND		1.0	ppbv	1	7/25/2012 07:20 AM
2-Hexanone	ND		1.0	ppbv	1	7/25/2012 07:20 AM
2-Propanol	ND		1.0	ppbv	1	7/25/2012 07:20 AM
4-Ethyltoluene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
4-Methyl-2-pentanone	ND		1.0	ppbv	1	7/25/2012 07:20 AM
<b>Acetone</b>	<b>11</b>	<b>1.0</b>	<b>ppbv</b>		1	7/25/2012 07:20 AM
Benzene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Benzyl chloride	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Bromodichloromethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Bromoform	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Bromomethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Carbon disulfide	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Carbon tetrachloride	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Chlorobenzene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Chloroethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Chloroform	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Chloromethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
cis-1,2-Dichloroethene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
cis-1,3-Dichloropropene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Cumene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Cyclohexane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Dibromochloromethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Dichlorodifluoromethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** OA-1  
**Collection Date:** 7/12/2012 08:25 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-02  
**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Ethylbenzene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Freon 113	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Freon 114	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Heptane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Hexachlorobutadiene	ND		2.0	ppbv	1	7/25/2012 07:20 AM
Hexane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
m,p-Xylene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Methylene chloride	ND		1.0	ppbv	1	7/25/2012 07:20 AM
MTBE	ND		1.0	ppbv	1	7/25/2012 07:20 AM
o-Xylene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Propene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Styrene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Tetrachloroethene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Tetrahydrofuran	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Toluene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
trans-1,2-Dichloroethene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
trans-1,3-Dichloropropene	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Trichloroethene	ND		0.40	ppbv	1	7/25/2012 07:20 AM
Trichlorofluoromethane	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Vinyl acetate	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Vinyl chloride	ND		1.0	ppbv	1	7/25/2012 07:20 AM
Surr: Bromofluorobenzene	105		60-140	%REC	1	7/25/2012 07:20 AM
<b>TO-15 BY GC/MS</b>			<b>ETO-15</b>			<b>Analyst: MRJ</b>
1,1,1-Trichloroethane	ND		5.5	µg/m³	1	7/25/2012 07:20 AM
1,1,2,2-Tetrachloroethane	ND		6.9	µg/m³	1	7/25/2012 07:20 AM
1,1,2-Trichloroethane	ND		5.5	µg/m³	1	7/25/2012 07:20 AM
1,1-Dichloroethane	ND		4.0	µg/m³	1	7/25/2012 07:20 AM
1,1-Dichloroethene	ND		4.0	µg/m³	1	7/25/2012 07:20 AM
1,2,4-Trichlorobenzene	ND		7.4	µg/m³	1	7/25/2012 07:20 AM
1,2,4-Trimethylbenzene	ND		4.9	µg/m³	1	7/25/2012 07:20 AM
1,2-Dibromoethane	ND		7.7	µg/m³	1	7/25/2012 07:20 AM
1,2-Dichlorobenzene	ND		6.0	µg/m³	1	7/25/2012 07:20 AM
1,2-Dichloroethane	ND		4.0	µg/m³	1	7/25/2012 07:20 AM
1,2-Dichloropropane	ND		4.6	µg/m³	1	7/25/2012 07:20 AM
1,3,5-Trimethylbenzene	ND		4.9	µg/m³	1	7/25/2012 07:20 AM
1,3-Butadiene	ND		2.2	µg/m³	1	7/25/2012 07:20 AM
1,3-Dichlorobenzene	ND		6.0	µg/m³	1	7/25/2012 07:20 AM
1,4-Dichlorobenzene	ND		6.0	µg/m³	1	7/25/2012 07:20 AM
1,4-Dioxane	ND		3.6	µg/m³	1	7/25/2012 07:20 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** OA-1  
**Collection Date:** 7/12/2012 08:25 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-02  
**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Butanone	ND		2.9	µg/m3	1	7/25/2012 07:20 AM
2-Hexanone	ND		4.1	µg/m3	1	7/25/2012 07:20 AM
2-Propanol	ND		2.5	µg/m3	1	7/25/2012 07:20 AM
4-Ethyltoluene	ND		4.9	µg/m3	1	7/25/2012 07:20 AM
4-Methyl-2-pentanone	ND		4.1	µg/m3	1	7/25/2012 07:20 AM
<b>Acetone</b>	<b>27</b>		<b>2.4</b>	<b>µg/m3</b>	1	7/25/2012 07:20 AM
Benzene	ND		3.2	µg/m3	1	7/25/2012 07:20 AM
Benzyl chloride	ND		5.2	µg/m3	1	7/25/2012 07:20 AM
Bromodichloromethane	ND		6.7	µg/m3	1	7/25/2012 07:20 AM
Bromoform	ND		10	µg/m3	1	7/25/2012 07:20 AM
Bromomethane	ND		3.9	µg/m3	1	7/25/2012 07:20 AM
Carbon disulfide	ND		3.1	µg/m3	1	7/25/2012 07:20 AM
Carbon tetrachloride	ND		6.3	µg/m3	1	7/25/2012 07:20 AM
Chlorobenzene	ND		4.6	µg/m3	1	7/25/2012 07:20 AM
Chloroethane	ND		2.6	µg/m3	1	7/25/2012 07:20 AM
Chloroform	ND		4.9	µg/m3	1	7/25/2012 07:20 AM
Chloromethane	ND		2.1	µg/m3	1	7/25/2012 07:20 AM
cis-1,2-Dichloroethene	ND		4.0	µg/m3	1	7/25/2012 07:20 AM
cis-1,3-Dichloropropene	ND		4.5	µg/m3	1	7/25/2012 07:20 AM
Cumene	ND		4.9	µg/m3	1	7/25/2012 07:20 AM
Cyclohexane	ND		3.4	µg/m3	1	7/25/2012 07:20 AM
Dibromochloromethane	ND		8.5	µg/m3	1	7/25/2012 07:20 AM
Dichlorodifluoromethane	ND		4.9	µg/m3	1	7/25/2012 07:20 AM
Ethyl acetate	ND		3.6	µg/m3	1	7/25/2012 07:20 AM
Ethylbenzene	ND		4.3	µg/m3	1	7/25/2012 07:20 AM
Freon 113	ND		7.7	µg/m3	1	7/25/2012 07:20 AM
Freon 114	ND		7.0	µg/m3	1	7/25/2012 07:20 AM
Heptane	ND		4.1	µg/m3	1	7/25/2012 07:20 AM
Hexachlorobutadiene	ND		22	µg/m3	1	7/25/2012 07:20 AM
Hexane	ND		3.5	µg/m3	1	7/25/2012 07:20 AM
m,p-Xylene	ND		4.3	µg/m3	1	7/25/2012 07:20 AM
Methylene chloride	ND		3.5	µg/m3	1	7/25/2012 07:20 AM
MTBE	ND		3.6	µg/m3	1	7/25/2012 07:20 AM
o-Xylene	ND		4.3	µg/m3	1	7/25/2012 07:20 AM
Propene	ND		1.7	µg/m3	1	7/25/2012 07:20 AM
Styrene	ND		4.3	µg/m3	1	7/25/2012 07:20 AM
Tetrachloroethene	ND		6.8	µg/m3	1	7/25/2012 07:20 AM
Tetrahydrofuran	ND		2.9	µg/m3	1	7/25/2012 07:20 AM
Toluene	ND		3.8	µg/m3	1	7/25/2012 07:20 AM
trans-1,2-Dichloroethene	ND		4.0	µg/m3	1	7/25/2012 07:20 AM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** OA-1  
**Collection Date:** 7/12/2012 08:25 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-02  
**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
trans-1,3-Dichloropropene	ND		4.5	µg/m3	1	7/25/2012 07:20 AM
Trichloroethene	ND		2.1	µg/m3	1	7/25/2012 07:20 AM
Trichlorofluoromethane	ND		5.6	µg/m3	1	7/25/2012 07:20 AM
Vinyl acetate	ND		3.5	µg/m3	1	7/25/2012 07:20 AM
Vinyl chloride	ND		2.6	µg/m3	1	7/25/2012 07:20 AM
<i>Surr: Bromofluorobenzene</i>	105		60-140	%REC	1	7/25/2012 07:20 AM

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**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB1 2-3  
**Collection Date:** 7/12/2012 04:00 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>						
Diesel (total)	15,000		330	mg/Kg-dry	20	7/20/2012
TPH C10-C20	19,000	E	330	mg/Kg-dry	20	7/20/2012
TPH C20-C34	6,600		170	mg/Kg-dry	10	7/20/2012
Surr: Nonane	61.6		26.9-74.3	%REC	10	7/20/2012
Surr: Pentacosane	0	S	48.9-129	%REC	10	7/20/2012
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>						
TPH C6-C12	150		44	mg/Kg-dry	20	7/19/2012 12:32 AM
Surr: Cyclooctane	66.5		55-135	%REC	20	7/19/2012 12:32 AM
<b>MOISTURE</b>						
Moisture	9.5		0.010	% of sample	1	7/21/2012
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	82,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
2-Methylnaphthalene	110,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Acenaphthene	39,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Acenaphthylene	12,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Anthracene	150,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Benzo(a)anthracene	200,000		55,000	µg/Kg-dry	100	7/25/2012 11:31 AM
Benzo(a)pyrene	190,000		110,000	µg/Kg-dry	100	7/25/2012 11:31 AM
Benzo(b)fluoranthene	180,000		110,000	µg/Kg-dry	100	7/25/2012 11:31 AM
Benzo(g,h,i)perylene	83,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Benzo(k)fluoranthene	56,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Carbazole	69,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Chrysene	200,000		110,000	µg/Kg-dry	100	7/25/2012 11:31 AM
Dibenzo(a,h)anthracene	30,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Dibenzofuran	98,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Fluoranthene	680,000		110,000	µg/Kg-dry	100	7/25/2012 11:31 AM
Fluorene	170,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Indeno(1,2,3-cd)pyrene	81,000		5,500	µg/Kg-dry	10	7/25/2012 12:00 PM
Naphthalene	110,000		11,000	µg/Kg-dry	10	7/25/2012 12:00 PM
Phenanthrene	730,000		110,000	µg/Kg-dry	100	7/25/2012 11:31 AM
Pyrene	490,000		110,000	µg/Kg-dry	100	7/25/2012 11:31 AM
Surr: 2-Fluorobiphenyl	107		30-116	%REC	1	7/21/2012 01:40 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,1,1-Trichloroethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,1,2,2-Tetrachloroethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,1,2-Trichloroethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB1 2-3  
**Collection Date:** 7/12/2012 04:00 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,1-Dichloroethene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,1-Dichloropropene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2,3-Trichlorobenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2,3-Trichloropropane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2,4-Trichlorobenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2,4-Trimethylbenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2-Dibromo-3-chloropropane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2-Dibromoethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2-Dichlorobenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2-Dichloroethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,2-Dichloropropane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,3,5-Trimethylbenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,3-Dichlorobenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,3-Dichloropropane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
1,4-Dichlorobenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
2,2-Dichloropropane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
2-Butanone	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
2-Chlorotoluene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
2-Hexanone	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
4-Chlorotoluene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
4-Methyl-2-pentanone	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Acetone	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Benzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Bromobenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Bromochloromethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Bromodichloromethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Bromoform	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Bromomethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Carbon disulfide	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Carbon tetrachloride	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Chlorobenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Chloroethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Chloroform	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Chloromethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
cis-1,2-Dichloroethene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
cis-1,3-Dichloropropene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Dibromochloromethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Dibromomethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Dichlorodifluoromethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM

**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers

**Project:** Barret Paving; Project No.: 063207.08

**Work Order:** 1207300

**Sample ID:** SB1 2-3

**Lab ID:** 1207300-03

**Collection Date:** 7/12/2012 04:00 PM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Hexachlorobutadiene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Isopropylbenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
m,p-Xylene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Methyl tert-butyl ether	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Methylene chloride	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
<b>Naphthalene</b>	<b>63,000</b>		<b>6,900</b>	<b>µg/Kg-dry</b>	1250	7/18/2012 06:19 AM
<b>n-Butylbenzene</b>	<b>830</b>		<b>690</b>	<b>µg/Kg-dry</b>	125	7/23/2012 01:55 PM
n-Propylbenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
o-Xylene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
p-Isopropyltoluene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
sec-Butylbenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Styrene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
tert-Butylbenzene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Tetrachloroethene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Toluene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
trans-1,2-Dichloroethene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
trans-1,3-Dichloropropene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Trichloroethene	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Trichlorofluoromethane	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Vinyl chloride	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Xylenes, Total	ND		690	µg/Kg-dry	125	7/23/2012 01:55 PM
Surr: 4-Bromofluorobenzene	106		62.7-159	%REC	1250	7/18/2012 06:19 AM
Surr: Dibromofluoromethane	100		88.2-133	%REC	1250	7/18/2012 06:19 AM
Surr: Toluene-d8	105		81.5-110	%REC	1250	7/18/2012 06:19 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB2 2-4  
**Collection Date:** 7/12/2012 02:45 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>						
Diesel (total)	11,000		330	mg/Kg-dry	20	7/20/2012
TPH C10-C20	9,400		330	mg/Kg-dry	20	7/20/2012
TPH C20-C34	4,600		160	mg/Kg-dry	10	7/20/2012
Surr: Nonane	65.5		26.9-74.3	%REC	10	7/20/2012
Surr: Pentacosane	0	S	48.9-129	%REC	10	7/20/2012
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>						
TPH C6-C12	40		2.2	mg/Kg-dry	1	7/18/2012 10:02 PM
Surr: Cyclooctane	123		55-135	%REC	1	7/18/2012 10:02 PM
<b>MOISTURE</b>						
Moisture	7.6		0.010	% of sample	1	7/21/2012
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	5,300		430	µg/Kg-dry	1	7/21/2012 02:15 AM
2-Methylnaphthalene	17,000		2,200	µg/Kg-dry	5	7/25/2012 12:29 PM
Acenaphthene	ND		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Acenaphthylene	ND		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Anthracene	2,500		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Benzo(a)anthracene	2,500		220	µg/Kg-dry	1	7/21/2012 02:15 AM
Benzo(a)pyrene	2,000		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Benzo(b)fluoranthene	2,100		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Benzo(g,h,i)perylene	1,000		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Benzo(k)fluoranthene	1,700		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Carbazole	ND		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Chrysene	2,300		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Dibenzo(a,h)anthracene	520		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Dibenzofuran	ND		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Fluoranthene	6,200		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Fluorene	2,400		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Indeno(1,2,3-cd)pyrene	1,200		220	µg/Kg-dry	1	7/21/2012 02:15 AM
Naphthalene	2,400		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Phenanthrene	8,600		2,200	µg/Kg-dry	5	7/25/2012 12:29 PM
Pyrene	5,700		430	µg/Kg-dry	1	7/21/2012 02:15 AM
Surr: 2-Fluorobiphenyl	57.3		30-116	%REC	1	7/21/2012 02:15 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,1,1-Trichloroethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,1,2,2-Tetrachloroethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,1,2-Trichloroethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers

**Project:** Barret Paving; Project No.: 063207.08

**Work Order:** 1207300

**Sample ID:** SB2 2-4

**Lab ID:** 1207300-04

**Collection Date:** 7/12/2012 02:45 PM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,1-Dichloroethene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,1-Dichloropropene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,2,3-Trichlorobenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,2,3-Trichloropropane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,2,4-Trichlorobenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
<b>1,2,4-Trimethylbenzene</b>	<b>3,000</b>		<b>680</b>	<b>µg/Kg-dry</b>	125	7/23/2012 02:25 PM
1,2-Dibromo-3-chloropropane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,2-Dibromoethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,2-Dichlorobenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,2-Dichloroethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,2-Dichloropropane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
<b>1,3,5-Trimethylbenzene</b>	<b>1,400</b>		<b>680</b>	<b>µg/Kg-dry</b>	125	7/23/2012 02:25 PM
1,3-Dichlorobenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,3-Dichloropropane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
1,4-Dichlorobenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
2,2-Dichloropropane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
2-Butanone	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
2-Chlorotoluene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
2-Hexanone	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
4-Chlorotoluene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
4-Methyl-2-pentanone	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
<b>Acetone</b>	<b>700</b>		<b>680</b>	<b>µg/Kg-dry</b>	125	7/23/2012 02:25 PM
Benzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Bromobenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Bromochloromethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Bromodichloromethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Bromoform	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Bromomethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Carbon disulfide	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Carbon tetrachloride	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Chlorobenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Chloroethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Chloroform	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Chloromethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
cis-1,2-Dichloroethene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
cis-1,3-Dichloropropene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Dibromochloromethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Dibromomethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Dichlorodifluoromethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB2 2-4  
**Collection Date:** 7/12/2012 02:45 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Hexachlorobutadiene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Isopropylbenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
m,p-Xylene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Methyl tert-butyl ether	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Methylene chloride	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
<b>Naphthalene</b>	<b>2,600</b>		<b>680</b>	<b>µg/Kg-dry</b>	125	7/23/2012 02:25 PM
n-Butylbenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
n-Propylbenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
o-Xylene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
<b>p-Isopropyltoluene</b>	<b>720</b>		<b>680</b>	<b>µg/Kg-dry</b>	125	7/23/2012 02:25 PM
sec-Butylbenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Styrene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
tert-Butylbenzene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Tetrachloroethene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Toluene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
trans-1,2-Dichloroethene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
trans-1,3-Dichloropropene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Trichloroethene	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Trichlorofluoromethane	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
Vinyl chloride	ND		680	µg/Kg-dry	125	7/23/2012 02:25 PM
<b>Xylenes, Total</b>	<b>ND</b>		<b>680</b>	<b>µg/Kg-dry</b>	125	7/23/2012 02:25 PM
Surr: 4-Bromofluorobenzene	107		62.7-159	%REC	1250	7/18/2012 06:50 AM
Surr: Dibromofluoromethane	94.2		88.2-133	%REC	1250	7/18/2012 06:50 AM
Surr: Toluene-d8	102		81.5-110	%REC	1250	7/18/2012 06:50 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB3 2-4  
**Collection Date:** 7/12/2012 03:05 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-05  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>						
Diesel (total)	15,000		340	mg/Kg-dry	20	7/20/2012
TPH C10-C20	11,000		340	mg/Kg-dry	20	7/20/2012
TPH C20-C34	7,400		170	mg/Kg-dry	10	7/20/2012
Surr: Nonane	68.6		26.9-74.3	%REC	10	7/20/2012
Surr: Pentacosane	0	S	48.9-129	%REC	10	7/20/2012
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>						
TPH C6-C12	610		89	mg/Kg-dry	40	7/18/2012 10:33 PM
Surr: Cyclooctane	133		55-135	%REC	40	7/18/2012 10:33 PM
<b>MOISTURE</b>						
Moisture	10		0.010	% of sample	1	7/21/2012
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	250,000		110,000	µg/Kg-dry	100	7/25/2012 12:58 PM
2-Methylnaphthalene	500,000		110,000	µg/Kg-dry	100	7/25/2012 12:58 PM
Acenaphthene	79,000		11,000	µg/Kg-dry	10	7/25/2012 01:28 PM
Acenaphthylene	9,700		1,100	µg/Kg-dry	1	7/21/2012 02:50 AM
Anthracene	97,000		11,000	µg/Kg-dry	10	7/25/2012 01:28 PM
Benzo(a)anthracene	78,000		5,600	µg/Kg-dry	10	7/25/2012 01:28 PM
Benzo(a)pyrene	59,000		11,000	µg/Kg-dry	10	7/25/2012 01:28 PM
Benzo(b)fluoranthene	60,000		11,000	µg/Kg-dry	10	7/25/2012 01:28 PM
Benzo(g,h,i)perylene	14,000		1,100	µg/Kg-dry	1	7/21/2012 02:50 AM
Benzo(k)fluoranthene	28,000		11,000	µg/Kg-dry	10	7/25/2012 01:28 PM
Carbazole	34,000		11,000	µg/Kg-dry	10	7/25/2012 01:28 PM
Chrysene	72,000		11,000	µg/Kg-dry	10	7/25/2012 01:28 PM
Dibenzo(a,h)anthracene	7,000		1,100	µg/Kg-dry	1	7/21/2012 02:50 AM
Dibenzofuran	190,000		110,000	µg/Kg-dry	100	7/25/2012 12:58 PM
Fluoranthene	290,000		110,000	µg/Kg-dry	100	7/25/2012 12:58 PM
Fluorene	180,000		11,000	µg/Kg-dry	10	7/25/2012 01:28 PM
Indeno(1,2,3-cd)pyrene	24,000		5,600	µg/Kg-dry	10	7/25/2012 01:28 PM
Naphthalene	1,300,000		110,000	µg/Kg-dry	100	7/25/2012 12:58 PM
Phenanthrene	390,000		110,000	µg/Kg-dry	100	7/25/2012 12:58 PM
Pyrene	200,000		110,000	µg/Kg-dry	100	7/25/2012 12:58 PM
Surr: 2-Fluorobiphenyl	79.6		30-116	%REC	1	7/21/2012 02:50 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,1,1-Trichloroethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,1,2,2-Tetrachloroethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,1,2-Trichloroethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB3 2-4  
**Collection Date:** 7/12/2012 03:05 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-05  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,1-Dichloroethene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,1-Dichloropropene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,2,3-Trichlorobenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,2,3-Trichloropropane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,2,4-Trichlorobenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
<b>1,2,4-Trimethylbenzene</b>	<b>54,000</b>		<b>35,000</b>	<b>µg/Kg-dry</b>	6250	7/23/2012 11:16 AM
1,2-Dibromo-3-chloropropane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,2-Dibromoethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,2-Dichlorobenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,2-Dichloroethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,2-Dichloropropane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,3,5-Trimethylbenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,3-Dichlorobenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,3-Dichloropropane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
1,4-Dichlorobenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
2,2-Dichloropropane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
2-Butanone	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
2-Chlorotoluene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
2-Hexanone	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
4-Chlorotoluene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
4-Methyl-2-pentanone	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Acetone	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Benzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Bromobenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Bromochloromethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Bromodichloromethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Bromoform	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Bromomethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Carbon disulfide	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Carbon tetrachloride	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Chlorobenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Chloroethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Chloroform	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Chloromethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
cis-1,2-Dichloroethene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
cis-1,3-Dichloropropene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Dibromochloromethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Dibromomethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Dichlorodifluoromethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB3 2-4  
**Collection Date:** 7/12/2012 03:05 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-05  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Hexachlorobutadiene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Isopropylbenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
m,p-Xylene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Methyl tert-butyl ether	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Methylene chloride	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
<b>Naphthalene</b>	<b>5,700,000</b>		<b>350,000</b>	<b>µg/Kg-dry</b>	62500	7/23/2012 12:54 PM
n-Butylbenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
n-Propylbenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
o-Xylene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
p-Isopropyltoluene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
<b>sec-Butylbenzene</b>	<b>40,000</b>		<b>35,000</b>	<b>µg/Kg-dry</b>	6250	7/23/2012 11:16 AM
Styrene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
tert-Butylbenzene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Tetrachloroethene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Toluene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
trans-1,2-Dichloroethene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
trans-1,3-Dichloropropene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Trichloroethene	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Trichlorofluoromethane	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
Vinyl chloride	ND		35,000	µg/Kg-dry	6250	7/23/2012 11:16 AM
<b>Xylenes, Total</b>	<b>ND</b>		<b>35,000</b>	<b>µg/Kg-dry</b>	6250	7/23/2012 11:16 AM
Surr: 4-Bromofluorobenzene	83.8		62.7-159	%REC	6250	7/23/2012 11:16 AM
Surr: Dibromofluoromethane	89.5		88.2-133	%REC	6250	7/23/2012 11:16 AM
Surr: Toluene-d8	97.4		81.5-110	%REC	6250	7/23/2012 11:16 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB4 2-4  
**Collection Date:** 7/12/2012 03:50 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-06  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>						
Diesel (total)	ND		18	mg/Kg-dry	1	7/20/2012
TPH C10-C20	ND		18	mg/Kg-dry	1	7/20/2012
<b>TPH C20-C34</b>	<b>25</b>		<b>18</b>	<b>mg/Kg-dry</b>	1	7/20/2012
Surr: Nonane	57.0		26.9-74.3	%REC	1	7/20/2012
Surr: Pentacosane	96.9		48.9-129	%REC	1	7/20/2012
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>						
TPH C6-C12	ND		2.4	mg/Kg-dry	1	7/18/2012 11:03 PM
Surr: Cyclooctane	104		55-135	%REC	1	7/18/2012 11:03 PM
<b>MOISTURE</b>						
Moisture	<b>18</b>		<b>0.010</b>	<b>% of sample</b>	1	7/21/2012
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
2-Methylnaphthalene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
Acenaphthene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
Acenaphthylene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
Anthracene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
<b>Benzo(a)anthracene</b>	<b>240</b>		<b>120</b>	<b>µg/Kg-dry</b>	1	7/20/2012 11:56 PM
Benzo(a)pyrene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
<b>Benzo(b)fluoranthene</b>	<b>250</b>		<b>240</b>	<b>µg/Kg-dry</b>	1	7/20/2012 11:56 PM
Benzo(g,h,i)perylene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
Benzo(k)fluoranthene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
<b>Carbazole</b>	<b>250</b>		<b>240</b>	<b>µg/Kg-dry</b>	1	7/20/2012 11:56 PM
<b>Chrysene</b>	<b>250</b>		<b>240</b>	<b>µg/Kg-dry</b>	1	7/20/2012 11:56 PM
Dibenzo(a,h)anthracene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
Dibenzofuran	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
<b>Fluoranthene</b>	<b>680</b>		<b>240</b>	<b>µg/Kg-dry</b>	1	7/20/2012 11:56 PM
Fluorene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>130</b>		<b>120</b>	<b>µg/Kg-dry</b>	1	7/20/2012 11:56 PM
Naphthalene	ND		240	µg/Kg-dry	1	7/20/2012 11:56 PM
<b>Phenanthrene</b>	<b>650</b>		<b>240</b>	<b>µg/Kg-dry</b>	1	7/20/2012 11:56 PM
<b>Pyrene</b>	<b>490</b>		<b>240</b>	<b>µg/Kg-dry</b>	1	7/20/2012 11:56 PM
Surr: 2-Fluorobiphenyl	76.1		30-116	%REC	1	7/20/2012 11:56 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,1,1-Trichloroethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,1,2,2-Tetrachloroethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,1,2-Trichloroethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB4 2-4  
**Collection Date:** 7/12/2012 03:50 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-06  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,1-Dichloroethene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,1-Dichloropropene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2,3-Trichlorobenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2,3-Trichloropropane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2,4-Trichlorobenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2,4-Trimethylbenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2-Dibromo-3-chloropropane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2-Dibromoethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2-Dichlorobenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2-Dichloroethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,2-Dichloropropane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,3,5-Trimethylbenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,3-Dichlorobenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,3-Dichloropropane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
1,4-Dichlorobenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
2,2-Dichloropropane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
<b>2-Butanone</b>	<b>43</b>		<b>6.1</b>	<b>µg/Kg-dry</b>	1	7/18/2012 04:46 AM
2-Chlorotoluene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
2-Hexanone	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
4-Chlorotoluene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
4-Methyl-2-pentanone	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
<b>Acetone</b>	<b>170</b>		<b>6.1</b>	<b>µg/Kg-dry</b>	1	7/18/2012 04:46 AM
Benzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Bromobenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Bromochloromethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Bromodichloromethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Bromoform	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Bromomethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Carbon disulfide	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Carbon tetrachloride	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Chlorobenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Chloroethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Chloroform	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Chloromethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
cis-1,2-Dichloroethene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
cis-1,3-Dichloropropene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Dibromochloromethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Dibromomethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Dichlorodifluoromethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB4 2-4  
**Collection Date:** 7/12/2012 03:50 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-06  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Hexachlorobutadiene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Isopropylbenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
<b>m,p-Xylene</b>	<b>6.3</b>		<b>6.1</b>	<b>µg/Kg-dry</b>	1	7/18/2012 04:46 AM
Methyl tert-butyl ether	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Methylene chloride	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
<b>Naphthalene</b>	<b>32</b>		<b>6.1</b>	<b>µg/Kg-dry</b>	1	7/18/2012 04:46 AM
n-Butylbenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
n-Propylbenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
o-Xylene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
p-Isopropyltoluene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
sec-Butylbenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Styrene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
tert-Butylbenzene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Tetrachloroethene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Toluene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
trans-1,2-Dichloroethene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
trans-1,3-Dichloropropene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Trichloroethene	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Trichlorofluoromethane	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
Vinyl chloride	ND		6.1	µg/Kg-dry	1	7/18/2012 04:46 AM
<b>Xylenes, Total</b>	<b>10</b>		<b>6.1</b>	<b>µg/Kg-dry</b>	1	7/18/2012 04:46 AM
<i>Surr: 4-Bromofluorobenzene</i>	106		62.7-159	%REC	1	7/18/2012 04:46 AM
<i>Surr: Dibromofluoromethane</i>	95.9		88.2-133	%REC	1	7/18/2012 04:46 AM
<i>Surr: Toluene-d8</i>	102		81.5-110	%REC	1	7/18/2012 04:46 AM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB5 1.5-3.5  
**Collection Date:** 7/12/2012 04:15 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-07  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>						
Diesel (total)	ND		19	mg/Kg-dry	1	7/20/2012
TPH C10-C20	ND		19	mg/Kg-dry	1	7/20/2012
TPH C20-C34	ND		19	mg/Kg-dry	1	7/20/2012
Surr: Nonane	56.9		26.9-74.3	%REC	1	7/20/2012
Surr: Pentacosane	99.0		48.9-129	%REC	1	7/20/2012
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>						
TPH C6-C12	ND		2.5	mg/Kg-dry	1	7/18/2012 11:34 PM
Surr: Cyclooctane	102		55-135	%REC	1	7/18/2012 11:34 PM
<b>MOISTURE</b>						
Moisture	20		0.010	% of sample	1	7/21/2012
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
2-Methylnaphthalene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Acenaphthene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Acenaphthylene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Anthracene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Benzo(a)anthracene	ND		130	µg/Kg-dry	1	7/21/2012 12:31 PM
Benzo(a)pyrene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Benzo(b)fluoranthene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Benzo(g,h,i)perylene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Benzo(k)fluoranthene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Carbazole	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Chrysene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Dibenzo(a,h)anthracene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Dibenzofuran	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Fluoranthene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Fluorene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Indeno(1,2,3-cd)pyrene	ND		130	µg/Kg-dry	1	7/21/2012 12:31 PM
Naphthalene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Phenanthrene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Pyrene	ND		250	µg/Kg-dry	1	7/21/2012 12:31 PM
Surr: 2-Fluorobiphenyl	70.7		30-116	%REC	1	7/21/2012 12:31 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,1,1-Trichloroethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,1,2,2-Tetrachloroethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,1,2-Trichloroethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB5 1.5-3.5  
**Collection Date:** 7/12/2012 04:15 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-07  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,1-Dichloroethene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,1-Dichloropropene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2,3-Trichlorobenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2,3-Trichloropropane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2,4-Trichlorobenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2,4-Trimethylbenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2-Dibromo-3-chloropropane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2-Dibromoethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2-Dichlorobenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2-Dichloroethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,2-Dichloropropane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,3,5-Trimethylbenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,3-Dichlorobenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,3-Dichloropropane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
1,4-Dichlorobenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
2,2-Dichloropropane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
<b>2-Butanone</b>	<b>27</b>		<b>6.2</b>	<b>µg/Kg-dry</b>	1	7/18/2012 05:17 AM
2-Chlorotoluene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
2-Hexanone	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
4-Chlorotoluene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
4-Methyl-2-pentanone	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
<b>Acetone</b>	<b>110</b>		<b>6.2</b>	<b>µg/Kg-dry</b>	1	7/18/2012 05:17 AM
Benzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Bromobenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Bromochloromethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Bromodichloromethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Bromoform	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Bromomethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Carbon disulfide	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Carbon tetrachloride	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Chlorobenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Chloroethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Chloroform	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Chloromethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
cis-1,2-Dichloroethene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
cis-1,3-Dichloropropene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Dibromochloromethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Dibromomethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Dichlorodifluoromethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM

**Note:**

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** SB5 1.5-3.5  
**Collection Date:** 7/12/2012 04:15 PM

**Work Order:** 1207300  
**Lab ID:** 1207300-07  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Hexachlorobutadiene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Isopropylbenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
m,p-Xylene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Methyl tert-butyl ether	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Methylene chloride	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Naphthalene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
n-Butylbenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
n-Propylbenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
o-Xylene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
p-Isopropyltoluene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
sec-Butylbenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Styrene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
tert-Butylbenzene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Tetrachloroethene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Toluene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
trans-1,2-Dichloroethene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
trans-1,3-Dichloropropene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Trichloroethene	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Trichlorofluoromethane	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Vinyl chloride	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Xylenes, Total	ND		6.2	µg/Kg-dry	1	7/18/2012 05:17 AM
Surr: 4-Bromofluorobenzene	111		62.7-159	%REC	1	7/18/2012 05:17 AM
Surr: Dibromofluoromethane	96.9		88.2-133	%REC	1	7/18/2012 05:17 AM
Surr: Toluene-d8	101		81.5-110	%REC	1	7/18/2012 05:17 AM

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**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW3 14-16  
**Collection Date:** 7/12/2012 09:50 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-08  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>						
Diesel (total)	ND		16	mg/Kg-dry	1	7/20/2012
TPH C10-C20	ND		16	mg/Kg-dry	1	7/20/2012
TPH C20-C34	ND		16	mg/Kg-dry	1	7/20/2012
Surr: Nonane	60.7		26.9-74.3	%REC	1	7/20/2012
Surr: Pentacosane	95.4		48.9-129	%REC	1	7/20/2012
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>						
TPH C6-C12	ND		2.1	mg/Kg-dry	1	7/19/2012 12:02 AM
Surr: Cyclooctane	105		55-135	%REC	1	7/19/2012 12:02 AM
<b>MOISTURE</b>						
Moisture	6.1		0.010	% of sample	1	7/21/2012
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
2-Methylnaphthalene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Acenaphthene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Acenaphthylene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Anthracene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Benzo(a)anthracene	ND		110	µg/Kg-dry	1	7/21/2012 01:06 AM
Benzo(a)pyrene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Benzo(b)fluoranthene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Benzo(g,h,i)perylene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Benzo(k)fluoranthene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Carbazole	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Chrysene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Dibenzo(a,h)anthracene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Dibenzofuran	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Fluoranthene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Fluorene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Indeno(1,2,3-cd)pyrene	ND		110	µg/Kg-dry	1	7/21/2012 01:06 AM
Naphthalene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Phenanthrene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Pyrene	ND		210	µg/Kg-dry	1	7/21/2012 01:06 AM
Surr: 2-Fluorobiphenyl	75.6		30-116	%REC	1	7/21/2012 01:06 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,1,1-Trichloroethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,1,2,2-Tetrachloroethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,1,2-Trichloroethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW3 14-16  
**Collection Date:** 7/12/2012 09:50 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-08  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,1-Dichloroethene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,1-Dichloropropene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2,3-Trichlorobenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2,3-Trichloropropane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2,4-Trichlorobenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2,4-Trimethylbenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2-Dibromo-3-chloropropane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2-Dibromoethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2-Dichlorobenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2-Dichloroethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,2-Dichloropropane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,3,5-Trimethylbenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,3-Dichlorobenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,3-Dichloropropane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
1,4-Dichlorobenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
2,2-Dichloropropane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
2-Butanone	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
2-Chlorotoluene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
2-Hexanone	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
4-Chlorotoluene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
4-Methyl-2-pentanone	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Acetone	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Benzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Bromobenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Bromochloromethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Bromodichloromethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Bromoform	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Bromomethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Carbon disulfide	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Carbon tetrachloride	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Chlorobenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Chloroethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Chloroform	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Chloromethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
cis-1,2-Dichloroethene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
cis-1,3-Dichloropropene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Dibromochloromethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Dibromomethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Dichlorodifluoromethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM

**Note:**

**ALS Environmental****Date:** 26-Jul-12**Client:** Soil and Materials Engineers**Project:** Barret Paving; Project No.: 063207.08**Work Order:** 1207300**Sample ID:** MW3 14-16**Lab ID:** 1207300-08**Collection Date:** 7/12/2012 09:50 AM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Hexachlorobutadiene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Isopropylbenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
m,p-Xylene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Methyl tert-butyl ether	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Methylene chloride	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Naphthalene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
n-Butylbenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
n-Propylbenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
o-Xylene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
p-Isopropyltoluene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
sec-Butylbenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Styrene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
tert-Butylbenzene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Tetrachloroethene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Toluene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
trans-1,2-Dichloroethene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
trans-1,3-Dichloropropene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Trichloroethene	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Trichlorofluoromethane	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Vinyl chloride	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Xylenes, Total	ND		5.3	µg/Kg-dry	1	7/18/2012 05:48 AM
Surr: 4-Bromofluorobenzene	112		62.7-159	%REC	1	7/18/2012 05:48 AM
Surr: Dibromofluoromethane	95.8		88.2-133	%REC	1	7/18/2012 05:48 AM
Surr: Toluene-d8	100		81.5-110	%REC	1	7/18/2012 05:48 AM

**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW1 2-4  
**Collection Date:** 7/12/2012 11:30 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-09  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>MOISTURE</b>			<b>SM2540B</b>		Prep Date: <b>7/20/2012</b>	Analyst: <b>CTS</b>
Moisture	14		0.010	% of sample	1	7/21/2012
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>		Prep Date: <b>7/19/2012</b>	Analyst: <b>JCL</b>
1-Methylnaphthalene	26,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
2-Methylnaphthalene	33,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Acenaphthene	35,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Acenaphthylene	ND		1,200	µg/Kg-dry	1	7/21/2012 03:24 AM
Anthracene	62,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Benzo(a)anthracene	72,000		12,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Benzo(a)pyrene	63,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Benzo(b)fluoranthene	64,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Benzo(g,h,i)perylene	30,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Benzo(k)fluoranthene	36,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Carbazole	26,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Chrysene	70,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Dibenzo(a,h)anthracene	11,000		1,200	µg/Kg-dry	1	7/21/2012 03:24 AM
Dibenzofuran	38,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Fluoranthene	240,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Fluorene	55,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Indeno(1,2,3-cd)pyrene	29,000		12,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Naphthalene	87,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Phenanthrene	220,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Pyrene	160,000		23,000	µg/Kg-dry	20	7/25/2012 01:57 PM
Surr: 2-Fluorobiphenyl	76.4		30-116	%REC	1	7/21/2012 03:24 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>		Analyst: <b>MHW</b>	
1,1,1,2-Tetrachloroethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,1,1-Trichloroethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,1,2,2-Tetrachloroethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,1,2-Trichloroethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,1-Dichloroethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,1-Dichloroethene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,1-Dichloropropene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,2,3-Trichlorobenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,2,3-Trichloropropane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,2,4-Trichlorobenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
<b>1,2,4-Trimethylbenzene</b>	<b>3,300</b>		<b>1,400</b>	<b>µg/Kg-dry</b>	250	7/23/2012 01:24 PM
1,2-Dibromo-3-chloropropane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,2-Dibromoethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,2-Dichlorobenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW1 2-4  
**Collection Date:** 7/12/2012 11:30 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-09  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,2-Dichloropropane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,3,5-Trimethylbenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,3-Dichlorobenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,3-Dichloropropane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
1,4-Dichlorobenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
2,2-Dichloropropane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
2-Butanone	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
2-Chlorotoluene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
2-Hexanone	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
4-Chlorotoluene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
4-Methyl-2-pentanone	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Acetone	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Benzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Bromobenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Bromoform	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Bromomethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Carbon disulfide	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Carbon tetrachloride	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Chlorobenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Chloroethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Chloroform	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Chloromethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
cis-1,2-Dichloroethene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
cis-1,3-Dichloropropene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Dibromochloromethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Dibromomethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Dichlorodifluoromethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Ethylbenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Hexachlorobutadiene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Isopropylbenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
m,p-Xylene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Methyl tert-butyl ether	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Methylene chloride	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
<b>Naphthalene</b>	<b>240,000</b>		<b>36,000</b>	<b>µg/Kg-dry</b>	6250	7/23/2012 12:16 PM
n-Butylbenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
n-Propylbenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
o-Xylene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW1 2-4  
**Collection Date:** 7/12/2012 11:30 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-09  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
p-Isopropyltoluene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
sec-Butylbenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Styrene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
tert-Butylbenzene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Tetrachloroethene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Toluene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
trans-1,2-Dichloroethene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
trans-1,3-Dichloropropene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Trichloroethene	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Trichlorofluoromethane	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Vinyl chloride	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
Xylenes, Total	ND		1,400	µg/Kg-dry	250	7/23/2012 01:24 PM
<i>Surr: 4-Bromofluorobenzene</i>	84.4		62.7-159	%REC	6250	7/23/2012 12:16 PM
<i>Surr: Dibromofluoromethane</i>	90.2		88.2-133	%REC	6250	7/23/2012 12:16 PM
<i>Surr: Toluene-d8</i>	97.2		81.5-110	%REC	6250	7/23/2012 12:16 PM

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**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** DUP1  
**Collection Date:** 7/13/2012

**Work Order:** 1207300  
**Lab ID:** 1207300-10  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	91		6.3	µg/L	50	7/19/2012 09:14 PM
2-Methylnaphthalene	79		6.3	µg/L	50	7/19/2012 09:14 PM
Acenaphthene	28		6.3	µg/L	50	7/19/2012 09:14 PM
Acenaphthylene	ND		0.13	µg/L	1	7/17/2012 11:43 PM
Anthracene	8.9		0.13	µg/L	1	7/17/2012 11:43 PM
Benzo(a)anthracene	0.77		0.13	µg/L	1	7/17/2012 11:43 PM
Benzo(a)pyrene	0.39		0.13	µg/L	1	7/17/2012 11:43 PM
Benzo(b)fluoranthene	0.48		0.14	µg/L	1	7/17/2012 11:43 PM
Benzo(g,h,i)perylene	0.18		0.13	µg/L	1	7/17/2012 11:43 PM
Benzo(k)fluoranthene	0.22		0.20	µg/L	1	7/17/2012 11:43 PM
Carbazole	78		6.3	µg/L	50	7/19/2012 09:14 PM
Chrysene	0.76		0.13	µg/L	1	7/17/2012 11:43 PM
Dibenzo(a,h)anthracene	ND		0.13	µg/L	1	7/17/2012 11:43 PM
Dibenzofuran	25		6.3	µg/L	50	7/19/2012 09:14 PM
Fluoranthene	8.5		0.13	µg/L	1	7/17/2012 11:43 PM
Fluorene	30		6.3	µg/L	50	7/19/2012 09:14 PM
Indeno(1,2,3-cd)pyrene	0.18		0.13	µg/L	1	7/17/2012 11:43 PM
Naphthalene	440		6.3	µg/L	50	7/19/2012 09:14 PM
Phenanthrene	39		6.3	µg/L	50	7/19/2012 09:14 PM
Pyrene	4.8		0.13	µg/L	1	7/17/2012 11:43 PM
Surr: 2-Fluorobiphenyl	59.2		48-102	%REC	1	7/17/2012 11:43 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	7/24/2012 02:26 PM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** DUP1  
**Collection Date:** 7/13/2012

**Work Order:** 1207300  
**Lab ID:** 1207300-10  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
2-Butanone	ND		5.0	µg/L	1	7/24/2012 02:26 PM
2-Chlorotoluene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
2-Hexanone	ND		5.0	µg/L	1	7/24/2012 02:26 PM
4-Chlorotoluene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	7/24/2012 02:26 PM
<b>Acetone</b>	<b>12</b>		<b>5.0</b>	<b>µg/L</b>	1	7/24/2012 02:26 PM
Benzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Bromobenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Bromoform	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Bromomethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Bromodichloromethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Carbon disulfide	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Carbon tetrachloride	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Chlorobenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Chloroethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Chloroform	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Chloromethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Dibromochloromethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Dibromomethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Ethylbenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Isopropylbenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
m,p-Xylene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Methylene chloride	ND		5.0	µg/L	1	7/24/2012 02:26 PM
<b>Naphthalene</b>	<b>480</b>		<b>50</b>	<b>µg/L</b>	10	7/24/2012 03:56 PM
n-Butylbenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
n-Propylbenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
o-Xylene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
sec-Butylbenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** DUP1  
**Collection Date:** 7/13/2012

**Work Order:** 1207300  
**Lab ID:** 1207300-10  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Styrene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
tert-Butylbenzene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Tetrachloroethene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Toluene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Trichloroethene	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	7/24/2012 02:26 PM
Vinyl chloride	ND		2.0	µg/L	1	7/24/2012 02:26 PM
Xylenes, Total	ND		5.0	µg/L	1	7/24/2012 02:26 PM
<i>Surr: 4-Bromofluorobenzene</i>	87.1		61-131	%REC	1	7/24/2012 02:26 PM
<i>Surr: Dibromofluoromethane</i>	96.0		87-126	%REC	1	7/24/2012 02:26 PM
<i>Surr: Toluene-d8</i>	96.0		84-111	%REC	1	7/24/2012 02:26 PM

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**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW1  
**Collection Date:** 7/13/2012 10:00 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-11  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	110		6.6	µg/L	50	7/19/2012 09:34 PM
2-Methylnaphthalene	97		6.6	µg/L	50	7/19/2012 09:34 PM
Acenaphthene	28		6.6	µg/L	50	7/19/2012 09:34 PM
Acenaphthylene	ND		0.13	µg/L	1	7/18/2012 12:04 PM
Anthracene	12		0.13	µg/L	1	7/18/2012 12:04 PM
Benzo(a)anthracene	1.7		0.13	µg/L	1	7/18/2012 12:04 PM
Benzo(a)pyrene	0.68		0.13	µg/L	1	7/18/2012 12:04 PM
Benzo(b)fluoranthene	0.96		0.14	µg/L	1	7/18/2012 12:04 PM
Benzo(g,h,i)perylene	0.26		0.13	µg/L	1	7/18/2012 12:04 PM
Benzo(k)fluoranthene	0.38		0.21	µg/L	1	7/18/2012 12:04 PM
Carbazole	64		6.6	µg/L	50	7/19/2012 09:34 PM
Chrysene	1.8		0.13	µg/L	1	7/18/2012 12:04 PM
Dibenzo(a,h)anthracene	ND		0.13	µg/L	1	7/18/2012 12:04 PM
Dibenzofuran	25		6.6	µg/L	50	7/19/2012 09:34 PM
Fluoranthene	19		6.6	µg/L	50	7/19/2012 09:34 PM
Fluorene	29		6.6	µg/L	50	7/19/2012 09:34 PM
Indeno(1,2,3-cd)pyrene	0.29		0.13	µg/L	1	7/18/2012 12:04 PM
Naphthalene	440		6.6	µg/L	50	7/19/2012 09:34 PM
Phenanthrene	45		6.6	µg/L	50	7/19/2012 09:34 PM
Pyrene	10		0.13	µg/L	1	7/18/2012 12:04 PM
Surr: 2-Fluorobiphenyl	56.6		48-102	%REC	1	7/18/2012 12:04 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	7/24/2012 01:26 PM

Note:

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW1  
**Collection Date:** 7/13/2012 10:00 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-11  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
2-Butanone	ND		5.0	µg/L	1	7/24/2012 01:26 PM
2-Chlorotoluene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
2-Hexanone	ND		5.0	µg/L	1	7/24/2012 01:26 PM
4-Chlorotoluene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	7/24/2012 01:26 PM
<b>Acetone</b>	<b>12</b>		<b>5.0</b>	<b>µg/L</b>	1	7/24/2012 01:26 PM
Benzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Bromobenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Bromochloromethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Bromodichloromethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Bromoform	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Bromomethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Carbon disulfide	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Carbon tetrachloride	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Chlorobenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Chloroethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Chloroform	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Chloromethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Dibromochloromethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Dibromomethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Ethylbenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Isopropylbenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
m,p-Xylene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Methylene chloride	ND		5.0	µg/L	1	7/24/2012 01:26 PM
<b>Naphthalene</b>	<b>530</b>		<b>50</b>	<b>µg/L</b>	10	7/24/2012 04:26 PM
n-Butylbenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
n-Propylbenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
o-Xylene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
sec-Butylbenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW1  
**Collection Date:** 7/13/2012 10:00 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-11  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Styrene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
tert-Butylbenzene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Tetrachloroethene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Toluene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Trichloroethene	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	7/24/2012 01:26 PM
Vinyl chloride	ND		2.0	µg/L	1	7/24/2012 01:26 PM
Xylenes, Total	ND		5.0	µg/L	1	7/24/2012 01:26 PM
<i>Surr: 4-Bromofluorobenzene</i>	85.8		61-131	%REC	1	7/24/2012 01:26 PM
<i>Surr: Dibromofluoromethane</i>	99.3		87-126	%REC	1	7/24/2012 01:26 PM
<i>Surr: Toluene-d8</i>	96.9		84-111	%REC	1	7/24/2012 01:26 PM

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**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW2  
**Collection Date:** 7/13/2012 08:45 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-12  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
2-Methylnaphthalene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Acenaphthene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Acenaphthylene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Anthracene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Benzo(a)anthracene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Benzo(a)pyrene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Benzo(b)fluoranthene	ND		0.13	µg/L	1	7/18/2012 12:25 PM
Benzo(g,h,i)perylene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Benzo(k)fluoranthene	ND		0.19	µg/L	1	7/18/2012 12:25 PM
Carbazole	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Chrysene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Dibenzo(a,h)anthracene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Dibenzofuran	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Fluoranthene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Fluorene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
<b>Naphthalene</b>	<b>0.24</b>		<b>0.12</b>	<b>µg/L</b>	1	7/18/2012 12:25 PM
<b>Phenanthrene</b>	<b>0.12</b>	J	<b>0.12</b>	<b>µg/L</b>	1	7/18/2012 12:25 PM
Pyrene	ND		0.12	µg/L	1	7/18/2012 12:25 PM
Surr: 2-Fluorobiphenyl	63.8		48-102	%REC	1	7/18/2012 12:25 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	7/18/2012 07:55 PM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW2  
**Collection Date:** 7/13/2012 08:45 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-12  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
2-Butanone	ND		5.0	µg/L	1	7/18/2012 07:55 PM
2-Chlorotoluene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
2-Hexanone	ND		5.0	µg/L	1	7/18/2012 07:55 PM
4-Chlorotoluene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Acetone	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Benzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Bromobenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Bromochloromethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Bromodichloromethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Bromoform	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Bromomethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Carbon disulfide	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Carbon tetrachloride	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Chlorobenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Chloroethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Chloroform	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Chloromethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Dibromochloromethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Dibromomethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Ethylbenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Isopropylbenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
m,p-Xylene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Methylene chloride	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Naphthalene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
n-Butylbenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
n-Propylbenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
o-Xylene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
sec-Butylbenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM

**Note:**

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW2  
**Collection Date:** 7/13/2012 08:45 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-12  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Styrene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
tert-Butylbenzene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Tetrachloroethene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Toluene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Trichloroethene	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	7/18/2012 07:55 PM
Vinyl chloride	ND		2.0	µg/L	1	7/18/2012 07:55 PM
Xylenes, Total	ND		5.0	µg/L	1	7/18/2012 07:55 PM
<i>Surr: 4-Bromofluorobenzene</i>	99.0		61-131	%REC	1	7/18/2012 07:55 PM
<i>Surr: Dibromofluoromethane</i>	101		87-126	%REC	1	7/18/2012 07:55 PM
<i>Surr: Toluene-d8</i>	94.5		84-111	%REC	1	7/18/2012 07:55 PM

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**Note:**

# ALS Environmental

Date: 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW3  
**Collection Date:** 7/13/2012 09:30 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-13  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PAH COMPOUNDS</b>						
1-Methylnaphthalene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
2-Methylnaphthalene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Acenaphthene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Acenaphthylene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Anthracene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Benzo(a)anthracene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Benzo(a)pyrene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Benzo(b)fluoranthene	ND		0.12	µg/L	1	7/18/2012 12:46 PM
Benzo(g,h,i)perylene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Benzo(k)fluoranthene	ND		0.18	µg/L	1	7/18/2012 12:46 PM
Carbazole	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Chrysene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Dibenz(a,h)anthracene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Dibenzofuran	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Fluoranthene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Fluorene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Indeno(1,2,3-cd)pyrene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
<b>Naphthalene</b>	<b>1.9</b>		<b>0.11</b>	<b>µg/L</b>	1	7/18/2012 12:46 PM
Phenanthrene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Pyrene	ND		0.11	µg/L	1	7/18/2012 12:46 PM
Surr: 2-Fluorobiphenyl	60.8		48-102	%REC	1	7/18/2012 12:46 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	7/18/2012 08:25 PM

Note:

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW3  
**Collection Date:** 7/13/2012 09:30 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-13  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
2-Butanone	ND		5.0	µg/L	1	7/18/2012 08:25 PM
2-Chlorotoluene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
2-Hexanone	ND		5.0	µg/L	1	7/18/2012 08:25 PM
4-Chlorotoluene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	7/18/2012 08:25 PM
<b>Acetone</b>	<b>6.7</b>		<b>5.0</b>	<b>µg/L</b>	1	7/18/2012 08:25 PM
Benzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Bromobenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Bromochloromethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Bromodichloromethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Bromoform	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Bromomethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Carbon disulfide	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Carbon tetrachloride	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Chlorobenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Chloroethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Chloroform	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Chloromethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Dibromochloromethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Dibromomethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Ethylbenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Isopropylbenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
m,p-Xylene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Methylene chloride	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Naphthalene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
n-Butylbenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
n-Propylbenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
o-Xylene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
sec-Butylbenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM

**Note:**

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** MW3  
**Collection Date:** 7/13/2012 09:30 AM

**Work Order:** 1207300  
**Lab ID:** 1207300-13  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Styrene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
tert-Butylbenzene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Tetrachloroethene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Toluene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Trichloroethene	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	7/18/2012 08:25 PM
Vinyl chloride	ND		2.0	µg/L	1	7/18/2012 08:25 PM
Xylenes, Total	ND		5.0	µg/L	1	7/18/2012 08:25 PM
<i>Surr: 4-Bromofluorobenzene</i>	95.0		61-131	%REC	1	7/18/2012 08:25 PM
<i>Surr: Dibromofluoromethane</i>	99.4		87-126	%REC	1	7/18/2012 08:25 PM
<i>Surr: Toluene-d8</i>	95.6		84-111	%REC	1	7/18/2012 08:25 PM

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**Note:**

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** Trip Blank  
**Collection Date:** 7/13/2012

**Work Order:** 1207300  
**Lab ID:** 1207300-14  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>						
1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
2-Butanone	ND		5.0	µg/L	1	7/17/2012 04:26 PM
2-Chlorotoluene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
2-Hexanone	ND		5.0	µg/L	1	7/17/2012 04:26 PM
4-Chlorotoluene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Acetone	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Benzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Bromobenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Bromochloromethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Bromodichloromethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Bromoform	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Bromomethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Carbon disulfide	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Carbon tetrachloride	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Chlorobenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Chloroethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Chloroform	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Chloromethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM

**Note:**

**ALS Environmental****Date:** 26-Jul-12

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Sample ID:** Trip Blank  
**Collection Date:** 7/13/2012

**Work Order:** 1207300  
**Lab ID:** 1207300-14  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Dibromochloromethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Dibromomethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Ethylbenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Isopropylbenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
m,p-Xylene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Methylene chloride	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Naphthalene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
n-Butylbenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
n-Propylbenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
o-Xylene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
sec-Butylbenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Styrene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
tert-Butylbenzene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Tetrachloroethene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Toluene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Trichloroethene	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Vinyl chloride	ND		2.0	µg/L	1	7/17/2012 04:26 PM
Xylenes, Total	ND		5.0	µg/L	1	7/17/2012 04:26 PM
Surr: 4-Bromofluorobenzene	93.0		61-131	%REC	1	7/17/2012 04:26 PM
Surr: Dibromofluoromethane	103		87-126	%REC	1	7/17/2012 04:26 PM
Surr: Toluene-d8	96.9		84-111	%REC	1	7/17/2012 04:26 PM

**Note:**

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**Work Order:** 1207300

**Analytical Comments**

<b>Method</b>	<b>Type:</b>	<b>SampID</b>	<b>SeqNo</b>	<b>Analysis</b>	<b>Comments</b>
Batch <u>12318</u>					
SW8015B	Analysis	1207300-03B	470824	Diesel Range Organics	Pentacosane Surrogate could not be calculated due to high levels of hydrocarbon within the sample.
SW8015B	Analysis	1207300-04B	470825	Diesel Range Organics	Pentacosane Surrogate could not be calculated due to high levels of hydrocarbon within the sample.
SW8015B	Analysis	1207300-05B	470826	Diesel Range Organics	Pentacosane Surrogate could not be calculated due to high levels of hydrocarbon within the sample.

Client: Soil and Materials Engineers

**QC BATCH REPORT**

Work Order: 1207300

Project: Barret Paving; Project No.: 063207.08

Batch ID: R92679		Instrument ID VMS3		Method: ETO-15								
Mblk	Sample ID: MBLK-R92679					Units: ppbv		Analysis Date: 7/24/2012 09:54 AM				
Client ID:		Run ID: VMS3_120724A		SeqNo: 472940		Prep Date:		DF: 1				
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane		ND		1.0								
1,1,2,2-Tetrachloroethane		ND		1.0								
1,1,2-Trichloroethane		ND		1.0								
1,1-Dichloroethane		ND		1.0								
1,1-Dichloroethene		ND		1.0								
1,2,4-Trichlorobenzene		ND		2.0								
1,2,4-Trimethylbenzene		ND		1.0								
1,2-Dibromoethane		ND		1.0								
1,2-Dichlorobenzene		ND		1.0								
1,2-Dichloroethane		ND		1.0								
1,2-Dichloropropane		ND		1.0								
1,3,5-Trimethylbenzene		ND		1.0								
1,3-Butadiene		ND		1.0								
1,3-Dichlorobenzene		ND		1.0								
1,4-Dichlorobenzene		ND		1.0								
1,4-Dioxane		ND		1.0								
2-Butanone		ND		1.0								
2-Hexanone		ND		1.0								
2-Propanol		3.02		1.0								
4-Ethyltoluene		ND		1.0								
4-Methyl-2-pentanone		ND		1.0								
Acetone		0.51		1.0								J
Benzene		ND		1.0								
Benzyl chloride		ND		1.0								
Bromodichloromethane		ND		1.0								
Bromoform		ND		1.0								
Bromomethane		ND		1.0								
Carbon disulfide		ND		1.0								
Carbon tetrachloride		ND		1.0								
Chlorobenzene		ND		1.0								
Chloroethane		ND		1.0								
Chloroform		ND		1.0								
Chloromethane		ND		1.0								
cis-1,2-Dichloroethene		ND		1.0								
cis-1,3-Dichloropropene		ND		1.0								
Cumene		ND		1.0								
Cyclohexane		ND		1.0								
Dibromochloromethane		ND		1.0								
Dichlorodifluoromethane		ND		1.0								
Ethyl acetate		ND		1.0								
Ethylbenzene		ND		1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: R92679	Instrument ID VMS3	Method: ETO-15				
Freon 113	ND	1.0				
Freon 114	ND	1.0				
Heptane	ND	1.0				
Hexachlorobutadiene	ND	2.0				
Hexane	ND	1.0				
m,p-Xylene	ND	1.0				
Methylene chloride	ND	1.0				
MTBE	ND	1.0				
o-Xylene	ND	1.0				
Propene	ND	1.0				
Styrene	ND	1.0				
Tetrachloroethene	ND	1.0				
Tetrahydrofuran	ND	1.0				
Toluene	ND	1.0				
trans-1,2-Dichloroethene	ND	1.0				
trans-1,3-Dichloropropene	ND	1.0				
Trichloroethene	ND	0.40				
Trichlorofluoromethane	ND	1.0				
Vinyl acetate	ND	1.0				
Vinyl chloride	ND	1.0				
<i>Surr: Bromofluorobenzene</i>	25.95	0	25	0	104	60-140
						0

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

# QC BATCH REPORT

Batch ID: **R92679**      Instrument ID **VMS3**      Method: **ETO-15**

LCS	Sample ID: <b>LCS-R92679</b>	Units: <b>ppbv</b>				Analysis Date: <b>7/24/2012 08:38 AM</b>				
Client ID:	Run ID: <b>VMS3_120724A</b>	SeqNo: <b>472939</b>				Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	10.43	1.0	10	0	104	60-140		0		
1,1,2,2-Tetrachloroethane	8.23	1.0	10	0	82.3	60-140		0		
1,1,2-Trichloroethane	8.22	1.0	10	0	82.2	60-140		0		
1,1-Dichloroethane	9.81	1.0	10	0	98.1	60-140		0		
1,1-Dichloroethene	10.06	1.0	10	0	101	60-140		0		
1,2,4-Trichlorobenzene	6.75	2.0	10	0	67.5	60-140		0		
1,2,4-Trimethylbenzene	8.95	1.0	10	0	89.5	60-140		0		
1,2-Dibromoethane	8.49	1.0	10	0	84.9	60-140		0		
1,2-Dichlorobenzene	8.58	1.0	10	0	85.8	60-140		0		
1,2-Dichloroethane	10.87	1.0	10	0	109	60-140		0		
1,2-Dichloropropane	8.34	1.0	10	0	83.4	60-140		0		
1,3,5-Trimethylbenzene	8.89	1.0	10	0	88.9	60-140		0		
1,3-Butadiene	10.5	1.0	10	0	105	60-140		0		
1,3-Dichlorobenzene	8.37	1.0	10	0	83.7	60-140		0		
1,4-Dichlorobenzene	8.34	1.0	10	0	83.4	60-140		0		
1,4-Dioxane	9.13	1.0	10	0	91.3	60-140		0		
2-Butanone	9.7	1.0	10	0	97	60-140		0		
2-Hexanone	10.52	1.0	10	0	105	60-140		0		
2-Propanol	12.97	1.0	10	0	130	60-140		0		B
4-Ethyltoluene	8.91	1.0	10	0	89.1	60-140		0		
4-Methyl-2-pentanone	10.07	1.0	10	0	101	60-140		0		
Acetone	9.86	1.0	10	0	98.6	60-140		0		
Benzene	8.83	1.0	10	0	88.3	60-140		0		
Benzyl chloride	10.63	1.0	10	0	106	60-140		0		
Bromodichloromethane	9.82	1.0	10	0	98.2	60-140		0		
Bromoform	9.24	1.0	10	0	92.4	60-140		0		
Bromomethane	10.92	1.0	10	0	109	60-140		0		
Carbon disulfide	9.11	1.0	10	0	91.1	60-140		0		
Carbon tetrachloride	11.03	1.0	10	0	110	60-140		0		
Chlorobenzene	8.16	1.0	10	0	81.6	60-140		0		
Chloroethane	8.79	1.0	10	0	87.9	60-140		0		
Chloroform	9.65	1.0	10	0	96.5	60-140		0		
Chloromethane	8.6	1.0	10	0	86	60-140		0		
cis-1,2-Dichloroethene	9.93	1.0	10	0	99.3	60-140		0		
cis-1,3-Dichloropropene	9.11	1.0	10	0	91.1	60-140		0		
Cumene	7.33	1.0	10	0	73.3	60-140		0		
Cyclohexane	8.25	1.0	10	0	82.5	60-140		0		
Dibromochloromethane	9.51	1.0	10	0	95.1	60-140		0		
Dichlorodifluoromethane	9.97	1.0	10	0	99.7	60-140		0		
Ethyl acetate	10.39	1.0	10	0	104	60-140		0		
Ethylbenzene	8.41	1.0	10	0	84.1	60-140		0		
Freon 113	9.04	1.0	10	0	90.4	60-140		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: R92679	Instrument ID VMS3	Method: ETO-15					
Freon 114	9.03	1.0	10	0	90.3	60-140	0
Heptane	8.69	1.0	10	0	86.9	60-140	0
Hexachlorobutadiene	7.42	2.0	10	0	74.2	60-140	0
Hexane	8.71	1.0	10	0	87.1	60-140	0
m,p-Xylene	18.28	1.0	20	0	91.4	60-140	0
Methylene chloride	9.65	1.0	10	0	96.5	60-140	0
MTBE	10.32	1.0	10	0	103	60-140	0
o-Xylene	8.84	1.0	10	0	88.4	60-140	0
Propene	8.84	1.0	10	0	88.4	60-140	0
Styrene	8.36	1.0	10	0	83.6	60-140	0
Tetrachloroethene	8.4	1.0	10	0	84	60-140	0
Tetrahydrofuran	9.42	1.0	10	0	94.2	60-140	0
Toluene	8.5	1.0	10	0	85	60-140	0
trans-1,2-Dichloroethene	9.09	1.0	10	0	90.9	60-140	0
trans-1,3-Dichloropropene	10	1.0	10	0	100	60-140	0
Trichloroethene	8.87	0.40	10	0	88.7	60-140	0
Trichlorofluoromethane	10.19	1.0	10	0	102	60-140	0
Vinyl acetate	8.32	1.0	10	0	83.2	60-140	0
Vinyl chloride	10.63	1.0	10	0	106	60-140	0
Surr: Bromofluorobenzene	27.5	0	25	0	110	60-140	0

The following samples were analyzed in this batch:

1207300-01A      1207300-02A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 4 of 36

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **12318**      Instrument ID **GC8**      Method: **SW8015B**

<b>MBLK</b>	Sample ID: <b>MBLK-12318-12318</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/20/2012</b>		
Client ID:	Run ID: <b>GC8_120720A</b>				SeqNo: <b>470818</b>		Prep Date: <b>7/20/2012</b>	DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit
Diesel (total)	ND	15							
TPH C10-C20	ND	15							
TPH C20-C34	ND	15							
<i>Surr: Nonane</i>	4.832	0	8.333	0	58	26.9-74.3		0	
<i>Surr: Pentacosane</i>	8.369	0	8.333	0	100	48.9-129		0	
<b>LCS</b>	Sample ID: <b>LCS-12318-12318</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/20/2012</b>		
Client ID:	Run ID: <b>GC8_120720A</b>				SeqNo: <b>470819</b>		Prep Date: <b>7/20/2012</b>	DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit
Diesel (total)	87.04	15	83.33	0	104	68.5-110		0	
<i>Surr: Nonane</i>	5.147	0	8.333	0	61.8	26.9-74.3		0	
<i>Surr: Pentacosane</i>	8.488	0	8.333	0	102	48.9-129		0	
<b>MS</b>	Sample ID: <b>1207203-26BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/20/2012</b>		
Client ID:	Run ID: <b>GC8_120720A</b>				SeqNo: <b>470821</b>		Prep Date: <b>7/20/2012</b>	DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit
Diesel (total)	83.96	15	83.14	0	101	15.5-139		0	
<i>Surr: Nonane</i>	4.697	0	8.314	0	56.5	26.9-74.3		0	
<i>Surr: Pentacosane</i>	8.11	0	8.314	0	97.6	48.9-129		0	
<b>MSD</b>	Sample ID: <b>1207203-26BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/20/2012</b>		
Client ID:	Run ID: <b>GC8_120720A</b>				SeqNo: <b>470822</b>		Prep Date: <b>7/20/2012</b>	DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit
Diesel (total)	79.67	15	83.25	0	95.7	15.5-139	83.96	5.25	21
<i>Surr: Nonane</i>	4.181	0	8.325	0	50.2	26.9-74.3	4.697	11.6	
<i>Surr: Pentacosane</i>	7.962	0	8.325	0	95.6	48.9-129	8.11	1.84	

The following samples were analyzed in this batch:

1207300-03B	1207300-04B	1207300-05B
1207300-06B	1207300-07B	1207300-08B

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92455**      Instrument ID **GC6**      Method: **SW8015A**

<b>MBLK</b>	Sample ID: <b>MB-R92455-R92455</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>7/18/2012 07:30 AM</b>		
Client ID:	Run ID: <b>GC6_120718A</b>				SeqNo: <b>467666</b>		Prep Date:		DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit
TPH C6-C12		1.068	2.0							J
<i>Surr: Cyclooctane</i>		98.55	0	100	0	98.5	55-135	0	0	
<b>LCS</b>	Sample ID: <b>LCS-R92455-R92455</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>7/18/2012 07:30 AM</b>		
Client ID:	Run ID: <b>GC6_120718A</b>				SeqNo: <b>467667</b>		Prep Date:		DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit
TPH C6-C12		17.35	2.0	20	0	86.8	69.5-120	0	0	
<i>Surr: Cyclooctane</i>		96.93	0	100	0	96.9	55-135	0	0	
<b>MS</b>	Sample ID: <b>1207364-01A MS</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>7/18/2012 07:30 AM</b>		
Client ID:	Run ID: <b>GC6_120718A</b>				SeqNo: <b>467686</b>		Prep Date:		DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit
TPH C6-C12		15.14	2.0	20	1.276	69.3	28.8-111	0	0	
<i>Surr: Cyclooctane</i>		105.2	0	100	0	105	55-135	0	0	
<b>MSD</b>	Sample ID: <b>1207364-01A MSD</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>7/18/2012 07:30 AM</b>		
Client ID:	Run ID: <b>GC6_120718A</b>				SeqNo: <b>467687</b>		Prep Date:		DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit
TPH C6-C12		15.97	2.0	20	1.276	73.5	22.5-117	15.14	5.31	15.7
<i>Surr: Cyclooctane</i>		98.65	0	100	0	98.6	55-135	105.2	6.42	

The following samples were analyzed in this batch:

1207300-03A	1207300-04A	1207300-05A
1207300-06A	1207300-07A	1207300-08A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **12221**      Instrument ID **SVMS2**      Method: **SW8270C**

<b>MBLK</b>	Sample ID: <b>MBLK-12221-12221</b>				Units: <b>µg/L</b>	Analysis Date: <b>7/17/2012 06:08 PM</b>				
Client ID:		Run ID: <b>SVMS2_120717A</b>			SeqNo: <b>467205</b>	Prep Date: <b>7/17/2012</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	ND	0.10								
2-Methylnaphthalene	ND	0.10								
Acenaphthene	ND	0.10								
Acenaphthylene	ND	0.10								
Anthracene	ND	0.10								
Benzo(a)anthracene	0.03	0.10								J
Benzo(a)pyrene	0.07	0.10								J
Benzo(b)fluoranthene	ND	0.11								
Benzo(g,h,i)perylene	0.1	0.10								J
Benzo(k)fluoranthene	ND	0.16								
Carbazole	ND	0.10								
Chrysene	ND	0.10								
Dibenzo(a,h)anthracene	0.09	0.10								J
Dibenzofuran	ND	0.10								
Fluoranthene	ND	0.10								
Fluorene	ND	0.10								
Indeno(1,2,3-cd)pyrene	0.07	0.10								J
Naphthalene	ND	0.10								
Phenanthrene	ND	0.10								
Pyrene	ND	0.10								
<i>Surr: 2-Fluorobiphenyl</i>	2.69	0	5	0	53.8	48-102		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **12221**      Instrument ID **SVMS2**      Method: **SW8270C**

LCS	Sample ID: <b>LCS-12221-12221</b>			Units: <b>µg/L</b>		Analysis Date: <b>7/17/2012 06:29 PM</b>		
Client ID:	Run ID: <b>SVMS2_120717A</b>			SeqNo: <b>467206</b>		Prep Date: <b>7/17/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Acenaphthene	3.83	0.10	5	0	76.6	53-119	0	
Acenaphthylene	5.03	0.10	5	0	101	62-101	0	
Anthracene	3.82	0.10	5	0	76.4	54-112	0	
Benzo(a)anthracene	4.53	0.10	5	0	90.6	49-128	0	
Benzo(a)pyrene	5.01	0.10	5	0	100	65-111	0	
Benzo(b)fluoranthene	4.62	0.11	5	0	92.4	50-110	0	
Benzo(g,h,i)perylene	4.36	0.10	5	0	87.2	56-115	0	
Benzo(k)fluoranthene	4.13	0.16	5	0	82.6	61-127	0	
Chrysene	4.69	0.10	5	0	93.8	62-116	0	
Dibenzo(a,h)anthracene	4.89	0.10	5	0	97.8	55-115	0	
Fluoranthene	4.26	0.10	5	0	85.2	67-119	0	
Fluorene	4.91	0.10	5	0	98.2	59-111	0	
Indeno(1,2,3-cd)pyrene	4.97	0.10	5	0	99.4	62-107	0	
Naphthalene	3.15	0.10	5	0	63	49-99	0	
Phenanthrene	4.51	0.10	5	0	90.2	61-110	0	
Pyrene	4.09	0.10	5	0	81.8	51-129	0	
Surr: 2-Fluorobiphenyl	3.33	0	5	0	66.6	48-102	0	

The following samples were analyzed in this batch:

1207300-10B	1207300-11B	1207300-12B
1207300-13B		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **12311**      Instrument ID **SVMS3**      Method: **SW8270C**

MBLK      Sample ID: <b>mblk-12311-12311</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>7/20/2012 09:37 PM</b>				
Client ID:		Run ID: <b>SVMS3_120720A</b>		SeqNo: <b>470299</b>		Prep Date: <b>7/19/2012</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit	Qual
1-Methylnaphthalene	ND	200							
2-Methylnaphthalene	ND	200							
Acenaphthene	ND	200							
Acenaphthylene	ND	200							
Anthracene	ND	200							
Benzo(a)anthracene	ND	100							
Benzo(a)pyrene	ND	200							
Benzo(b)fluoranthene	ND	200							
Benzo(g,h,i)perylene	ND	200							
Benzo(k)fluoranthene	ND	200							
Carbazole	ND	200							
Chrysene	ND	200							
Dibenzo(a,h)anthracene	ND	200							
Dibenzofuran	ND	200							
Fluoranthene	ND	200							
Fluorene	ND	200							
Indeno(1,2,3-cd)pyrene	ND	100							
Naphthalene	ND	200							
Phenanthrene	ND	200							
Pyrene	ND	200							
<i>Surr: 2-Fluorobiphenyl</i>	1134	0	1670	0	67.9	30-116	0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **12311**      Instrument ID **SVMS3**      Method: **SW8270C**

LCS	Sample ID: <b>Ics-12311-12311</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>7/20/2012 10:07 PM</b>			
Client ID:	Run ID: <b>SVMS3_120720A</b>			SeqNo: <b>470300</b>		Prep Date: <b>7/19/2012</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1171	200	1670	0	70.1	52-119		0		
Acenaphthylene	1289	200	1670	0	77.2	46-118		0		
Anthracene	1210	200	1670	0	72.5	56-109		0		
Benzo(a)anthracene	1261	100	1670	0	75.5	48-121		0		
Benzo(a)pyrene	1240	200	1670	0	74.3	62-111		0		
Benzo(b)fluoranthene	1074	200	1670	0	64.3	44-115		0		
Benzo(g,h,i)perylene	1073	200	1670	0	64.3	56-121		0		
Benzo(k)fluoranthene	1258	200	1670	0	75.3	61-121		0		
Chrysene	1265	200	1670	0	75.7	61-120		0		
Dibenzo(a,h)anthracene	1085	200	1670	0	65	56-119		0		
Fluoranthene	1393	200	1670	0	83.4	63-120		0		
Fluorene	1141	200	1670	0	68.3	61-105		0		
Indeno(1,2,3-cd)pyrene	1031	100	1670	0	61.8	55-109		0		
Naphthalene	1198	200	1670	0	71.7	50-106		0		
Phenanthrene	1245	200	1670	0	74.5	59-109		0		
Pyrene	1319	200	1670	0	79	55-117		0		
<i>Surr: 2-Fluorobiphenyl</i>	1246	0	1670	0	74.6	30-116		0		

MS	Sample ID: <b>1207203-27BMS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>7/20/2012 10:37 PM</b>			
Client ID:	Run ID: <b>SVMS3_120720A</b>			SeqNo: <b>470301</b>		Prep Date: <b>7/19/2012</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1119	200	1668	0	67.1	52-103		0		
Acenaphthylene	1241	200	1668	0	74.4	58-114		0		
Anthracene	1125	200	1668	0	67.4	51-106		0		
Benzo(a)anthracene	1087	100	1668	0	65.2	47-114		0		
Benzo(a)pyrene	1168	200	1668	0	70	55-106		0		
Benzo(b)fluoranthene	1008	200	1668	0	60.5	40-106		0		
Benzo(g,h,i)perylene	1130	200	1668	0	67.8	49-113		0		
Benzo(k)fluoranthene	1148	200	1668	0	68.9	57-119		0		
Chrysene	1135	200	1668	0	68	52-107		0		
Dibenzo(a,h)anthracene	1139	200	1668	0	68.3	46-116		0		
Fluoranthene	1196	200	1668	0	71.7	52-120		0		
Fluorene	1125	200	1668	0	67.4	53-107		0		
Indeno(1,2,3-cd)pyrene	1082	100	1668	0	64.9	51-107		0		
Naphthalene	1143	200	1668	0	68.5	47-100		0		
Phenanthrene	1143	200	1668	0	68.6	52-105		0		
Pyrene	1097	200	1668	0	65.8	51-111		0		
<i>Surr: 2-Fluorobiphenyl</i>	1146	0	1668	0	68.7	30-116		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **12311**      Instrument ID **SVMS3**      Method: **SW8270C**

MSD	Sample ID: <b>1207203-27BMSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>7/20/2012 11:07 PM</b>			
Client ID:	Run ID: <b>SVMS3_120720A</b>			SeqNo: <b>470302</b>		Prep Date: <b>7/19/2012</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1092	200	1671	0	65.4	52-103	1119	2.4	20	
Acenaphthylene	1197	200	1671	0	71.7	58-114	1241	3.58	20	
Anthracene	1093	200	1671	0	65.4	51-106	1125	2.84	24	
Benzo(a)anthracene	1070	100	1671	0	64.1	47-114	1087	1.56	21	
Benzo(a)pyrene	1165	200	1671	0	69.7	55-106	1168	0.233	20	
Benzo(b)fluoranthene	981.3	200	1671	0	58.7	40-106	1008	2.71	20	
Benzo(g,h,i)perylene	1106	200	1671	0	66.2	49-113	1130	2.13	20	
Benzo(k)fluoranthene	1133	200	1671	0	67.8	57-119	1148	1.32	24	
Chrysene	1078	200	1671	0	64.6	52-107	1135	5.1	19	
Dibenzo(a,h)anthracene	1117	200	1671	0	66.9	46-116	1139	1.99	20	
Fluoranthene	1196	200	1671	0	71.6	52-120	1196	0.0552	20	
Fluorene	1101	200	1671	0	65.9	53-107	1125	2.14	20	
Indeno(1,2,3-cd)pyrene	1055	100	1671	0	63.1	51-107	1082	2.58	20	
Naphthalene	1109	200	1671	0	66.4	47-100	1143	3.03	20	
Phenanthrene	1138	200	1671	0	68.1	52-105	1143	0.476	20	
Pyrene	1094	200	1671	0	65.5	51-111	1097	0.29	20	
<i>Surr: 2-Fluorobiphenyl</i>	1113	0	1671	0	66.6	30-116	1146	2.93		

The following samples were analyzed in this batch:

1207300-03B	1207300-04B	1207300-05B
1207300-06B	1207300-07B	1207300-08B
1207300-09B		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92410**      Instrument ID **VMS2**      Method: **SW8260**

Analyte	Result	PQL	SPK Val	Units: <b>µg/Kg</b>		Analysis Date: <b>7/17/2012 11:37 PM</b>		
				SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD
1,1,1,2-Tetrachloroethane	ND	5.0						
1,1,1-Trichloroethane	ND	5.0						
1,1,2,2-Tetrachloroethane	ND	5.0						
1,1,2-Trichloroethane	ND	5.0						
1,1-Dichloroethane	ND	5.0						
1,1-Dichloroethene	ND	5.0						
1,1-Dichloropropene	ND	5.0						
1,2,3-Trichlorobenzene	ND	5.0						
1,2,3-Trichloropropane	ND	5.0						
1,2,4-Trichlorobenzene	ND	5.0						
1,2,4-Trimethylbenzene	ND	5.0						
1,2-Dibromo-3-chloropropane	ND	5.0						
1,2-Dibromoethane	ND	5.0						
1,2-Dichlorobenzene	ND	5.0						
1,2-Dichloroethane	ND	5.0						
1,2-Dichloropropane	ND	5.0						
1,3,5-Trimethylbenzene	ND	5.0						
1,3-Dichlorobenzene	ND	5.0						
1,3-Dichloropropane	ND	5.0						
1,4-Dichlorobenzene	ND	5.0						
2,2-Dichloropropane	ND	5.0						
2-Butanone	ND	5.0						
2-Chlorotoluene	ND	5.0						
2-Hexanone	ND	5.0						
4-Chlorotoluene	ND	5.0						
4-Methyl-2-pentanone	ND	5.0						
Acetone	ND	5.0						
Benzene	ND	5.0						
Bromobenzene	ND	5.0						
Bromochloromethane	ND	5.0						
Bromodichloromethane	ND	5.0						
Bromoform	ND	5.0						
Bromomethane	ND	5.0						
Carbon disulfide	ND	5.0						
Carbon tetrachloride	ND	5.0						
Chlorobenzene	ND	5.0						
Chloroethane	ND	5.0						
Chloroform	ND	5.0						
Chloromethane	ND	5.0						
cis-1,2-Dichloroethene	ND	5.0						
cis-1,3-Dichloropropene	ND	5.0						
Dibromochloromethane	ND	5.0						

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: R92410	Instrument ID VMS2	Method: SW8260				
Dibromomethane	ND	5.0				
Dichlorodifluoromethane	ND	5.0				
Ethylbenzene	ND	5.0				
Hexachlorobutadiene	ND	5.0				
Isopropylbenzene	ND	5.0				
m,p-Xylene	ND	5.0				
Methyl tert-butyl ether	ND	5.0				
Methylene chloride	ND	5.0				
Naphthalene	1.22	5.0				J
n-Butylbenzene	ND	5.0				
n-Propylbenzene	ND	5.0				
o-Xylene	ND	5.0				
p-Isopropyltoluene	ND	5.0				
sec-Butylbenzene	ND	5.0				
Styrene	ND	5.0				
tert-Butylbenzene	ND	5.0				
Tetrachloroethene	ND	5.0				
Toluene	ND	5.0				
trans-1,2-Dichloroethene	ND	5.0				
trans-1,3-Dichloropropene	ND	5.0				
Trichloroethene	ND	5.0				
Trichlorofluoromethane	ND	5.0				
Vinyl chloride	ND	5.0				
Xylenes, Total	ND	5.0				
Surr: 4-Bromofluorobenzene	56.06	0	50	0	112	62.7-159
Surr: Dibromofluoromethane	48.12	0	50	0	96.2	88.2-133
Surr: Toluene-d8	51.06	0	50	0	102	81.5-110

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92410**      Instrument ID **VMS2**      Method: **SW8260**

LCS	Sample ID: <b>LCS-R92410</b>	Units: <b>µg/Kg</b>				Analysis Date: <b>7/18/2012 12:08 PM</b>				
Client ID:	Run ID: <b>VMS2_120717B</b>	SeqNo: <b>466656</b>				Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.19	5.0	50	0	98.4	70-132		0		
1,1-Dichloroethene	43.88	5.0	50	0	87.8	61.2-140		0		
1,2-Dichloroethane	47.49	5.0	50	0	95	67.3-139		0		
1,3-Dichlorobenzene	48.48	5.0	50	0	97	67.5-126		0		
1,4-Dichlorobenzene	46.93	5.0	50	0	93.9	69.5-124		0		
Benzene	49.2	5.0	50	0	98.4	67.2-135		0		
Carbon tetrachloride	47.45	5.0	50	0	94.9	68.6-138		0		
Chlorobenzene	49.67	5.0	50	0	99.3	66.4-133		0		
Chloroform	50.51	5.0	50	0	101	68.2-127		0		
cis-1,2-Dichloroethene	49.81	5.0	50	0	99.6	62.1-135		0		
Ethylbenzene	49.62	5.0	50	0	99.2	67.8-132		0		
m,p-Xylene	98.18	5.0	100	0	98.2	66.4-132		0		
Styrene	49.86	5.0	50	0	99.7	67.6-134		0		
Tetrachloroethene	49.91	5.0	50	0	99.8	70.3-144		0		
Toluene	48.02	5.0	50	0	96	67.8-130		0		
Trichloroethene	48.15	5.0	50	0	96.3	68.5-136		0		
Surr: 4-Bromofluorobenzene	48.89	0	50	0	97.8	62.7-159		0		
Surr: Dibromofluoromethane	49.24	0	50	0	98.5	88.2-133		0		
Surr: Toluene-d8	49.33	0	50	0	98.7	81.5-110		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92410**      Instrument ID **VMS2**      Method: **SW8260**

MS	Sample ID: <b>1207288-02A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>7/18/2012 07:52 AM</b>			
Client ID:	Run ID: <b>VMS2_120717B</b>			SeqNo: <b>466655</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.62	5.0	50	0	95.2	66.9-140		0		
1,1-Dichloroethene	42.19	5.0	50	0	84.4	65.9-143		0		
1,2-Dichloroethane	45.11	5.0	50	0	90.2	73-135		0		
1,3-Dichlorobenzene	46.96	5.0	50	0	93.9	61.2-125		0		
1,4-Dichlorobenzene	47.81	5.0	50	0	95.6	62.3-123		0		
Benzene	46.94	5.0	50	0	93.9	35.8-162		0		
Carbon tetrachloride	44.55	5.0	50	0	89.1	71.4-130		0		
Chlorobenzene	45.72	5.0	50	0	91.4	65.6-137		0		
Chloroform	46.88	5.0	50	0	93.8	69.6-128		0		
cis-1,2-Dichloroethene	45.84	5.0	50	0	91.7	68.8-130		0		
Ethylbenzene	46.59	5.0	50	0	93.2	68.6-124		0		
m,p-Xylene	90.62	5.0	100	0	90.6	64.5-125		0		
Styrene	45.58	5.0	50	0	91.2	65.9-125		0		
Tetrachloroethene	47.21	5.0	50	0	94.4	71.6-135		0		
Toluene	46.94	5.0	50	0	93.9	67.7-135		0		
Trichloroethene	47.36	5.0	50	0	94.7	70.9-139		0		
Surr: 4-Bromofluorobenzene	51.43	0	50	0	103	62.7-159		0		
Surr: Dibromofluoromethane	51.52	0	50	0	103	88.2-133		0		
Surr: Toluene-d8	51.36	0	50	0	103	81.5-110		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92410**      Instrument ID **VMS2**      Method: **SW8260**

MSD	Sample ID: <b>1207288-02A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>7/18/2012 08:24 AM</b>			
Client ID:	Run ID: <b>VMS2_120717B</b>			SeqNo: <b>466948</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	43.45	5.0	50	0	86.9	66.9-140	47.62	9.16	20	
1,1-Dichloroethene	39.02	5.0	50	0	78	65.9-143	42.19	7.81	20	
1,2-Dichloroethane	42.1	5.0	50	0	84.2	73-135	45.11	6.9	20	
1,3-Dichlorobenzene	45.49	5.0	50	0	91	61.2-125	46.96	3.18	21	
1,4-Dichlorobenzene	44.19	5.0	50	0	88.4	62.3-123	47.81	7.87	22.5	
Benzene	42.56	5.0	50	0	85.1	35.8-162	46.94	9.79	23.6	
Carbon tetrachloride	43.83	5.0	50	0	87.7	71.4-130	44.55	1.63	22.9	
Chlorobenzene	42.78	5.0	50	0	85.6	65.6-137	45.72	6.64	20	
Chloroform	43.32	5.0	50	0	86.6	69.6-128	46.88	7.89	23.1	
cis-1,2-Dichloroethene	44.12	5.0	50	0	88.2	68.8-130	45.84	3.82	23.7	
Ethylbenzene	43.41	5.0	50	0	86.8	68.6-124	46.59	7.07	24.9	
m,p-Xylene	84.42	5.0	100	0	84.4	64.5-125	90.62	7.08	25.1	
Styrene	41.94	5.0	50	0	83.9	65.9-125	45.58	8.32	22.8	
Tetrachloroethene	43.3	5.0	50	0	86.6	71.6-135	47.21	8.64	24.7	
Toluene	42.94	5.0	50	0	85.9	67.7-135	46.94	8.9	20	
Trichloroethene	42.89	5.0	50	0	85.8	70.9-139	47.36	9.91	20	
Surr: 4-Bromofluorobenzene	51.73	0	50	0	103	62.7-159	51.43	0.582		
Surr: Dibromofluoromethane	50.09	0	50	0	100	88.2-133	51.52	2.81		
Surr: Toluene-d8	50.77	0	50	0	102	81.5-110	51.36	1.16		

The following samples were analyzed in this batch:

1207300-03A	1207300-04A	1207300-06A
1207300-07A	1207300-08A	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92411**      Instrument ID **VMS1**      Method: **SW8260**

<b>MBLK</b>	Sample ID: <b>MBLK-R92411</b>				Units: <b>µg/L</b>	Analysis Date: <b>7/17/2012 01:12 PM</b>				
Client ID:		Run ID: <b>VMS1_120717B</b>			SeqNo: <b>466665</b>	Prep Date:	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: R92411	Instrument ID VMS1	Method: SW8260					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	5.0					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	5.0					
Naphthalene	ND	5.0					
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	5.0					
Surr: 4-Bromofluorobenzene	46.2	0	50	0	92.4	61-131	0
Surr: Dibromofluoromethane	51.69	0	50	0	103	87-126	0
Surr: Toluene-d8	48.93	0	50	0	97.9	84-111	0

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92411**      Instrument ID **VMS1**      Method: **SW8260**

LCS	Sample ID: <b>LCS-R92411</b>	Units: <b>µg/L</b>				Analysis Date: <b>7/17/2012 12:42 PM</b>				
Client ID:	Run ID: <b>VMS1_120717B</b>	SeqNo: <b>466664</b>				Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.3	5.0	50	0	94.6	48.4-140		0		
1,1-Dichloroethene	44.82	5.0	50	0	89.6	45.5-150		0		
1,2-Dichloroethane	46.9	5.0	50	0	93.8	46.5-141		0		
1,3-Dichlorobenzene	44.51	5.0	50	0	89	42.5-133		0		
1,4-Dichlorobenzene	43.32	5.0	50	0	86.6	38.9-136		0		
Benzene	46.34	5.0	50	0	92.7	50.7-134		0		
Carbon tetrachloride	47.31	5.0	50	0	94.6	45.5-143		0		
Chlorobenzene	45.19	5.0	50	0	90.4	45-133		0		
Chloroform	46.49	5.0	50	0	93	52.4-136		0		
cis-1,2-Dichloroethene	45.83	5.0	50	0	91.7	49.7-138		0		
Ethylbenzene	47.55	5.0	50	0	95.1	37.8-145		0		
m,p-Xylene	94.17	5.0	100	0	94.2	25.1-163		0		
o-Xylene	47.49	5.0	50	0	95	50.2-128		0		
Styrene	48.97	5.0	50	0	97.9	26.3-172		0		
Tetrachloroethene	46.51	5.0	50	0	93	37.3-139		0		
Toluene	45.23	5.0	50	0	90.5	44-135		0		
Trichloroethene	45.05	5.0	50	0	90.1	46.9-134		0		
Xylenes, Total	141.7	5.0	150	0	94.4	47.3-132		0		
Surr: 4-Bromofluorobenzene	47.57	0	50	0	95.1	61-131		0		
Surr: Dibromofluoromethane	49.59	0	50	0	99.2	87-126		0		
Surr: Toluene-d8	51.28	0	50	0	103	84-111		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92411**      Instrument ID **VMS1**      Method: **SW8260**

MS	Sample ID: <b>1207182-09A MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>7/17/2012 02:25 PM</b>			
Client ID:	Run ID: <b>VMS1_120717B</b>			SeqNo: <b>466667</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.57	5.0	50	0	93.1	47.4-141		0		
1,1-Dichloroethene	43.89	5.0	50	0	87.8	56.3-140		0		
1,2-Dichloroethane	45.82	5.0	50	0	91.6	50.1-139		0		
1,3-Dichlorobenzene	45.72	5.0	50	0	91.4	53-127		0		
1,4-Dichlorobenzene	44.47	5.0	50	0	88.9	53.4-129		0		
Benzene	45.48	5.0	50	0	91	52.8-136		0		
Carbon tetrachloride	46.77	5.0	50	0	93.5	48.1-141		0		
Chlorobenzene	44.09	5.0	50	0	88.2	52.4-132		0		
Chloroform	46.43	5.0	50	0	92.9	52.9-136		0		
cis-1,2-Dichloroethene	44.86	5.0	50	0	89.7	63.5-128		0		
Ethylbenzene	46.3	5.0	50	0	92.6	46.5-146		0		
m,p-Xylene	91.8	5.0	100	0	91.8	38.2-167		0		
o-Xylene	46.88	5.0	50	0	93.8	57.3-121		0		
Styrene	47.91	5.0	50	0	95.8	20.9-184		0		
Tetrachloroethene	44.6	5.0	50	0	89.2	55.2-134		0		
Toluene	44.46	5.0	50	0	88.9	45.1-138		0		
Trichloroethene	43.58	5.0	50	0	87.2	52.8-133		0		
Xylenes, Total	138.7	5.0	150	0	92.5	57.9-115		0		
Surr: 4-Bromofluorobenzene	48.3	0	50	0	96.6	61-131		0		
Surr: Dibromofluoromethane	50.15	0	50	0	100	87-126		0		
Surr: Toluene-d8	50.48	0	50	0	101	84-111		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92411**      Instrument ID **VMS1**      Method: **SW8260**

MSD	Sample ID: <b>1207182-09A MSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>7/17/2012 02:55 PM</b>			
Client ID:	Run ID: <b>VMS1_120717B</b>			SeqNo: <b>466668</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.38	5.0	50	0	88.8	47.4-141	46.57	4.82	20	
1,1-Dichloroethene	42.06	5.0	50	0	84.1	56.3-140	43.89	4.26	20	
1,2-Dichloroethane	44.27	5.0	50	0	88.5	50.1-139	45.82	3.44	20	
1,3-Dichlorobenzene	42.39	5.0	50	0	84.8	53-127	45.72	7.56	20	
1,4-Dichlorobenzene	42.03	5.0	50	0	84.1	53.4-129	44.47	5.64	20	
Benzene	43.48	5.0	50	0	87	52.8-136	45.48	4.5	20	
Carbon tetrachloride	44.56	5.0	50	0	89.1	48.1-141	46.77	4.84	20	
Chlorobenzene	41.83	5.0	50	0	83.7	52.4-132	44.09	5.26	20	
Chloroform	45.3	5.0	50	0	90.6	52.9-136	46.43	2.46	20	
cis-1,2-Dichloroethene	43.95	5.0	50	0	87.9	63.5-128	44.86	2.05	20	
Ethylbenzene	43.96	5.0	50	0	87.9	46.5-146	46.3	5.19	20	
m,p-Xylene	87.91	5.0	100	0	87.9	38.2-167	91.8	4.33	20	
o-Xylene	44.37	5.0	50	0	88.7	57.3-121	46.88	5.5	20	
Styrene	45.82	5.0	50	0	91.6	20.9-184	47.91	4.46	20	
Tetrachloroethene	42.23	5.0	50	0	84.5	55.2-134	44.6	5.46	20	
Toluene	42.28	5.0	50	0	84.6	45.1-138	44.46	5.03	20	
Trichloroethene	42.01	5.0	50	0	84	52.8-133	43.58	3.67	20	
Xylenes, Total	132.3	5.0	150	0	88.2	57.9-115	138.7	4.72	20	
Surr: 4-Bromofluorobenzene	47.91	0	50	0	95.8	61-131	48.3	0.811		
Surr: Dibromofluoromethane	50.19	0	50	0	100	87-126	50.15	0.0797		
Surr: Toluene-d8	50.28	0	50	0	101	84-111	50.48	0.397		

The following samples were analyzed in this batch:

1207300-14A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92447**      Instrument ID **VMS1**      Method: **SW8260**

<b>MBLK</b>	Sample ID: <b>MBLK2-R92447</b>				Units: <b>µg/L</b>	Analysis Date: <b>7/18/2012 01:01 PM</b>				
Client ID:		Run ID: <b>VMS1_120718B</b>			SeqNo: <b>467605</b>	Prep Date:	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: <b>R92447</b>	Instrument ID <b>VMS1</b>	Method: <b>SW8260</b>				
Dibromomethane	ND	5.0				
Dichlorodifluoromethane	ND	5.0				
Ethylbenzene	ND	5.0				
Hexachlorobutadiene	ND	5.0				
Isopropylbenzene	ND	5.0				
m,p-Xylene	ND	5.0				
Methyl tert-butyl ether	ND	5.0				
Methylene chloride	ND	5.0				
Naphthalene	ND	5.0				
n-Butylbenzene	ND	5.0				
n-Propylbenzene	ND	5.0				
o-Xylene	ND	5.0				
p-Isopropyltoluene	ND	5.0				
sec-Butylbenzene	ND	5.0				
Styrene	ND	5.0				
tert-Butylbenzene	ND	5.0				
Tetrachloroethene	ND	5.0				
Toluene	ND	5.0				
trans-1,2-Dichloroethene	ND	5.0				
trans-1,3-Dichloropropene	ND	5.0				
Trichloroethene	ND	5.0				
Trichlorofluoromethane	ND	5.0				
Vinyl chloride	ND	2.0				
Xylenes, Total	ND	5.0				
<i>Surr: 4-Bromofluorobenzene</i>	50.48	0	50	0	101	61-131
<i>Surr: Dibromofluoromethane</i>	50.71	0	50	0	101	87-126
<i>Surr: Toluene-d8</i>	48.33	0	50	0	96.7	84-111

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92447**      Instrument ID **VMS1**      Method: **SW8260**

LCS	Sample ID: <b>LCS-R92447</b>	Units: <b>µg/L</b>				Analysis Date: <b>7/18/2012 10:02 AM</b>				
Client ID:	Run ID: <b>VMS1_120718B</b>	SeqNo: <b>467599</b>				Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.78	5.0	50	0	106	48.4-140		0		
1,1-Dichloroethene	48.33	5.0	50	0	96.7	45.5-150		0		
1,2-Dichloroethane	53.77	5.0	50	0	108	46.5-141		0		
1,3-Dichlorobenzene	43.69	5.0	50	0	87.4	42.5-133		0		
1,4-Dichlorobenzene	42.7	5.0	50	0	85.4	38.9-136		0		
Benzene	50.6	5.0	50	0	101	50.7-134		0		
Carbon tetrachloride	51.82	5.0	50	0	104	45.5-143		0		
Chlorobenzene	48.06	5.0	50	0	96.1	45-133		0		
Chloroform	50.11	5.0	50	0	100	52.4-136		0		
cis-1,2-Dichloroethene	51.2	5.0	50	0	102	49.7-138		0		
Ethylbenzene	46.96	5.0	50	0	93.9	37.8-145		0		
m,p-Xylene	93.61	5.0	100	0	93.6	25.1-163		0		
o-Xylene	48.5	5.0	50	0	97	50.2-128		0		
Styrene	48.18	5.0	50	0	96.4	26.3-172		0		
Tetrachloroethene	46.51	5.0	50	0	93	37.3-139		0		
Toluene	45.27	5.0	50	0	90.5	44-135		0		
Trichloroethene	47.78	5.0	50	0	95.6	46.9-134		0		
Xylenes, Total	142.1	5.0	150	0	94.7	47.3-132		0		
Surr: 4-Bromofluorobenzene	50.06	0	50	0	100	61-131		0		
Surr: Dibromofluoromethane	49.12	0	50	0	98.2	87-126		0		
Surr: Toluene-d8	49.74	0	50	0	99.5	84-111		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92447**      Instrument ID **VMS1**      Method: **SW8260**

MS	Sample ID: <b>1207267-01A MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>7/18/2012 01:31 PM</b>			
Client ID:	Run ID: <b>VMS1_120718B</b>			SeqNo: <b>467606</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.05	5.0	50	0	100	47.4-141		0		
1,1-Dichloroethene	45.29	5.0	50	0	90.6	56.3-140		0		
1,2-Dichloroethane	52.2	5.0	50	0	104	50.1-139		0		
1,3-Dichlorobenzene	42.31	5.0	50	0	84.6	53-127		0		
1,4-Dichlorobenzene	40.94	5.0	50	0	81.9	53.4-129		0		
Benzene	48.18	5.0	50	0	96.4	52.8-136		0		
Carbon tetrachloride	48.09	5.0	50	0	96.2	48.1-141		0		
Chlorobenzene	45.63	5.0	50	0	91.3	52.4-132		0		
Chloroform	47.32	5.0	50	0	94.6	52.9-136		0		
cis-1,2-Dichloroethene	49.11	5.0	50	0	98.2	63.5-128		0		
Ethylbenzene	44.42	5.0	50	0	88.8	46.5-146		0		
m,p-Xylene	87.34	5.0	100	0	87.3	38.2-167		0		
o-Xylene	44.82	5.0	50	0	89.6	57.3-121		0		
Styrene	40.59	5.0	50	0	81.2	20.9-184		0		
Tetrachloroethene	44.58	5.0	50	0	89.2	55.2-134		0		
Toluene	43.04	5.0	50	0	86.1	45.1-138		0		
Trichloroethene	44.78	5.0	50	0	89.6	52.8-133		0		
Xylenes, Total	132.2	5.0	150	0	88.1	57.9-115		0		
Surr: 4-Bromofluorobenzene	50.1	0	50	0	100	61-131		0		
Surr: Dibromofluoromethane	49.31	0	50	0	98.6	87-126		0		
Surr: Toluene-d8	48.65	0	50	0	97.3	84-111		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92447**      Instrument ID **VMS1**      Method: **SW8260**

MSD	Sample ID: <b>1207267-01A MSD</b>				Units: <b>µg/L</b>			Analysis Date: <b>7/18/2012 02:01 PM</b>		
Client ID:	Run ID: <b>VMS1_120718B</b>				SeqNo: <b>467607</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.77	5.0	50	0	106	47.4-141	50.05	5.29	20	
1,1-Dichloroethene	46.6	5.0	50	0	93.2	56.3-140	45.29	2.85	20	
1,2-Dichloroethane	52.82	5.0	50	0	106	50.1-139	52.2	1.18	20	
1,3-Dichlorobenzene	47.3	5.0	50	0	94.6	53-127	42.31	11.1	20	
1,4-Dichlorobenzene	45.25	5.0	50	0	90.5	53.4-129	40.94	10	20	
Benzene	50.3	5.0	50	0	101	52.8-136	48.18	4.31	20	
Carbon tetrachloride	51.68	5.0	50	0	103	48.1-141	48.09	7.2	20	
Chlorobenzene	48.06	5.0	50	0	96.1	52.4-132	45.63	5.19	20	
Chloroform	48.51	5.0	50	0	97	52.9-136	47.32	2.48	20	
cis-1,2-Dichloroethene	50.11	5.0	50	0	100	63.5-128	49.11	2.02	20	
Ethylbenzene	48.94	5.0	50	0	97.9	46.5-146	44.42	9.68	20	
m,p-Xylene	95.47	5.0	100	0	95.5	38.2-167	87.34	8.89	20	
o-Xylene	49.05	5.0	50	0	98.1	57.3-121	44.82	9.01	20	
Styrene	42.93	5.0	50	0	85.9	20.9-184	40.59	5.6	20	
Tetrachloroethene	48.5	5.0	50	0	97	55.2-134	44.58	8.42	20	
Toluene	45.82	5.0	50	0	91.6	45.1-138	43.04	6.26	20	
Trichloroethene	47.38	5.0	50	0	94.8	52.8-133	44.78	5.64	20	
Xylenes, Total	144.5	5.0	150	0	96.3	57.9-115	132.2	8.93	20	
Surr: 4-Bromofluorobenzene	51.76	0	50	0	104	61-131	50.1	3.26		
Surr: Dibromofluoromethane	49.87	0	50	0	99.7	87-126	49.31	1.13		
Surr: Toluene-d8	48.86	0	50	0	97.7	84-111	48.65	0.431		

The following samples were analyzed in this batch:

1207300-12A      1207300-13A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92566**      Instrument ID **VMS1**      Method: **SW8260**

Analyte	Result	PQL	SPK Val	Units: <b>µg/Kg</b>		Analysis Date: <b>7/23/2012 09:46 AM</b>		
				SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD
1,1,1,2-Tetrachloroethane	ND	5.0						
1,1,1-Trichloroethane	ND	5.0						
1,1,2,2-Tetrachloroethane	ND	5.0						
1,1,2-Trichloroethane	ND	5.0						
1,1-Dichloroethane	ND	5.0						
1,1-Dichloroethene	ND	5.0						
1,1-Dichloropropene	ND	5.0						
1,2,3-Trichlorobenzene	ND	5.0						
1,2,3-Trichloropropane	ND	5.0						
1,2,4-Trichlorobenzene	ND	5.0						
1,2,4-Trimethylbenzene	ND	5.0						
1,2-Dibromo-3-chloropropane	ND	5.0						
1,2-Dibromoethane	ND	5.0						
1,2-Dichlorobenzene	ND	5.0						
1,2-Dichloroethane	ND	5.0						
1,2-Dichloropropane	ND	5.0						
1,3,5-Trimethylbenzene	ND	5.0						
1,3-Dichlorobenzene	ND	5.0						
1,3-Dichloropropane	ND	5.0						
1,4-Dichlorobenzene	ND	5.0						
2,2-Dichloropropane	ND	5.0						
2-Butanone	ND	5.0						
2-Chlorotoluene	ND	5.0						
2-Hexanone	ND	5.0						
4-Chlorotoluene	ND	5.0						
4-Methyl-2-pentanone	ND	5.0						
Acetone	ND	5.0						
Benzene	ND	5.0						
Bromobenzene	ND	5.0						
Bromochloromethane	ND	5.0						
Bromodichloromethane	ND	5.0						
Bromoform	ND	5.0						
Bromomethane	ND	5.0						
Carbon disulfide	ND	5.0						
Carbon tetrachloride	ND	5.0						
Chlorobenzene	ND	5.0						
Chloroethane	ND	5.0						
Chloroform	ND	5.0						
Chloromethane	ND	5.0						
cis-1,2-Dichloroethene	ND	5.0						
cis-1,3-Dichloropropene	ND	5.0						
Dibromochloromethane	ND	5.0						

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: <b>R92566</b>	Instrument ID <b>VMS1</b>	Method: <b>SW8260</b>				
Dibromomethane	ND	5.0				
Dichlorodifluoromethane	ND	5.0				
Ethylbenzene	ND	5.0				
Hexachlorobutadiene	ND	5.0				
Isopropylbenzene	ND	5.0				
m,p-Xylene	ND	5.0				
Methyl tert-butyl ether	ND	5.0				
Methylene chloride	ND	5.0				
Naphthalene	ND	5.0				
n-Butylbenzene	ND	5.0				
n-Propylbenzene	ND	5.0				
o-Xylene	ND	5.0				
p-Isopropyltoluene	ND	5.0				
sec-Butylbenzene	ND	5.0				
Styrene	ND	5.0				
tert-Butylbenzene	ND	5.0				
Tetrachloroethene	ND	5.0				
Toluene	ND	5.0				
trans-1,2-Dichloroethene	ND	5.0				
trans-1,3-Dichloropropene	ND	5.0				
Trichloroethene	ND	5.0				
Trichlorofluoromethane	ND	5.0				
Vinyl chloride	ND	5.0				
Xylenes, Total	ND	5.0				
<i>Surr: 4-Bromofluorobenzene</i>	42.48	0	50	0	85 62.7-159	0
<i>Surr: Dibromofluoromethane</i>	46.24	0	50	0	92.5 88.2-133	0
<i>Surr: Toluene-d8</i>	49.13	0	50	0	98.3 81.5-110	0

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92566**      Instrument ID **VMS1**      Method: **SW8260**

LCS	Sample ID: <b>LCS-R92566</b>	Units: <b>µg/Kg</b>				Analysis Date: <b>7/23/2012 08:45 AM</b>				
Client ID:	Run ID: <b>VMS1_120723B</b>	SeqNo: <b>470472</b>				Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	35.84	5.0	50	0	71.7	70-132		0		
1,1-Dichloroethene	34.54	5.0	50	0	69.1	61.2-140		0		
1,2-Dichloroethane	36.76	5.0	50	0	73.5	67.3-139		0		
1,3-Dichlorobenzene	39.27	5.0	50	0	78.5	67.5-126		0		
1,4-Dichlorobenzene	38.46	5.0	50	0	76.9	69.5-124		0		
Benzene	34.61	5.0	50	0	69.2	67.2-135		0		
Carbon tetrachloride	36.3	5.0	50	0	72.6	68.6-138		0		
Chlorobenzene	36.13	5.0	50	0	72.3	66.4-133		0		
Chloroform	37.82	5.0	50	0	75.6	68.2-127		0		
cis-1,2-Dichloroethene	37.59	5.0	50	0	75.2	62.1-135		0		
Ethylbenzene	36.08	5.0	50	0	72.2	67.8-132		0		
m,p-Xylene	75.68	5.0	100	0	75.7	66.4-132		0		
o-Xylene	38.09	5.0	50	0	76.2			0		
Styrene	41.41	5.0	50	0	82.8	67.6-134		0		
Tetrachloroethene	38.81	5.0	50	0	77.6	70.3-144		0		
Toluene	34.99	5.0	50	0	70	67.8-130		0		
Trichloroethene	35.66	5.0	50	0	71.3	68.5-136		0		
Xylenes, Total	113.8	5.0	150	0	75.8			0		
Surr: 4-Bromofluorobenzene	45.36	0	50	0	90.7	62.7-159		0		
Surr: Dibromofluoromethane	52.3	0	50	0	105	88.2-133		0		
Surr: Toluene-d8	50.33	0	50	0	101	81.5-110		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92566**      Instrument ID **VMS1**      Method: **SW8260**

MS	Sample ID: <b>1207390-29A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>7/23/2012 10:16 AM</b>			
Client ID:	Run ID: <b>VMS1_120723B</b>			SeqNo: <b>470475</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	37.81	5.0	50	0	75.6	66.9-140		0		
1,1-Dichloroethene	34.51	5.0	50	0	69	65.9-143		0		
1,2-Dichloroethane	38.52	5.0	50	0	77	73-135		0		
1,3-Dichlorobenzene	39.34	5.0	50	0	78.7	61.2-125		0		
1,4-Dichlorobenzene	39.07	5.0	50	0	78.1	62.3-123		0		
Benzene	36.13	5.0	50	0	72.3	35.8-162		0		
Carbon tetrachloride	37.39	5.0	50	0	74.8	71.4-130		0		
Chlorobenzene	37.36	5.0	50	0	74.7	65.6-137		0		
Chloroform	38.59	5.0	50	0	77.2	69.6-128		0		
cis-1,2-Dichloroethene	37.9	5.0	50	0	75.8	68.8-130		0		
Ethylbenzene	38.64	5.0	50	0	77.3	68.6-124		0		
m,p-Xylene	79.89	5.0	100	0	79.9	64.5-125		0		
o-Xylene	40.15	5.0	50	0	80.3			0		
Styrene	41.72	5.0	50	0	83.4	65.9-125		0		
Tetrachloroethene	61.37	5.0	50	6.796	109	71.6-135		0		
Toluene	36.04	5.0	50	0	72.1	67.7-135		0		
Trichloroethene	38.44	5.0	50	0	76.9	70.9-139		0		
Xylenes, Total	120	5.0	150	0	80			0		
Surr: 4-Bromofluorobenzene	48.48	0	50	0	97	62.7-159		0		
Surr: Dibromofluoromethane	50.13	0	50	0	100	88.2-133		0		
Surr: Toluene-d8	49.37	0	50	0	98.7	81.5-110		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92566**      Instrument ID **VMS1**      Method: **SW8260**

<b>MSD</b>	Sample ID: <b>1207390-29A MSD</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>7/23/2012 11:46 AM</b>		
Client ID:	Run ID: <b>VMS1_120723B</b>				SeqNo: <b>470478</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	40.19	5.0	50	0	80.4	66.9-140	37.81	6.1	20	
1,1-Dichloroethene	34.64	5.0	50	0	69.3	65.9-143	34.51	0.376	20	
1,2-Dichloroethane	41.48	5.0	50	0	83	73-135	38.52	7.4	20	
1,3-Dichlorobenzene	40.03	5.0	50	0	80.1	61.2-125	39.34	1.74	21	
1,4-Dichlorobenzene	38.58	5.0	50	0	77.2	62.3-123	39.07	1.26	22.5	
Benzene	38.04	5.0	50	0	76.1	35.8-162	36.13	5.15	23.6	
Carbon tetrachloride	39.63	5.0	50	0	79.3	71.4-130	37.39	5.82	22.9	
Chlorobenzene	38.79	5.0	50	0	77.6	65.6-137	37.36	3.76	20	
Chloroform	39.89	5.0	50	0	79.8	69.6-128	38.59	3.31	23.1	
cis-1,2-Dichloroethene	38.01	5.0	50	0	76	68.8-130	37.9	0.29	23.7	
Ethylbenzene	38.83	5.0	50	0	77.7	68.6-124	38.64	0.491	24.9	
m,p-Xylene	80.49	5.0	100	0	80.5	64.5-125	79.89	0.748	25.1	
o-Xylene	41.2	5.0	50	0	82.4		40.15	2.58		
Styrene	43.5	5.0	50	0	87	65.9-125	41.72	4.18	22.8	
Tetrachloroethene	56.4	5.0	50	6.796	99.2	71.6-135	61.37	8.44	24.7	
Toluene	38.42	5.0	50	0	76.8	67.7-135	36.04	6.39	20	
Trichloroethene	39.74	5.0	50	0	79.5	70.9-139	38.44	3.33	20	
Xylenes, Total	121.7	5.0	150	0	81.1		120	1.37		
Surr: 4-Bromofluorobenzene	44.49	0	50	0	89	62.7-159	48.48	8.58		
Surr: Dibromofluoromethane	47.46	0	50	0	94.9	88.2-133	50.13	5.47		
Surr: Toluene-d8	49.53	0	50	0	99.1	81.5-110	49.37	0.324		

The following samples were analyzed in this batch:

1207300-03A	1207300-04A	1207300-05A
1207300-09A		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92616**      Instrument ID **VMS1**      Method: **SW8260**

<b>MBLK</b>	Sample ID: <b>MBLK-R92616</b>				Units: <b>µg/L</b>	Analysis Date: <b>7/24/2012 12:26 PM</b>				
Client ID:		Run ID: <b>VMS1_120724A</b>			SeqNo: <b>471641</b>	Prep Date:	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: <b>R92616</b>	Instrument ID <b>VMS1</b>	Method: <b>SW8260</b>				
Dibromomethane	ND	5.0				
Dichlorodifluoromethane	ND	5.0				
Ethylbenzene	ND	5.0				
Hexachlorobutadiene	ND	5.0				
Isopropylbenzene	ND	5.0				
m,p-Xylene	ND	5.0				
Methyl tert-butyl ether	ND	5.0				
Methylene chloride	ND	5.0				
Naphthalene	ND	5.0				
n-Butylbenzene	ND	5.0				
n-Propylbenzene	ND	5.0				
o-Xylene	ND	5.0				
p-Isopropyltoluene	ND	5.0				
sec-Butylbenzene	ND	5.0				
Styrene	ND	5.0				
tert-Butylbenzene	ND	5.0				
Tetrachloroethene	ND	5.0				
Toluene	ND	5.0				
trans-1,2-Dichloroethene	ND	5.0				
trans-1,3-Dichloropropene	ND	5.0				
Trichloroethene	ND	5.0				
Trichlorofluoromethane	ND	5.0				
Vinyl chloride	ND	2.0				
Xylenes, Total	ND	5.0				
<i>Surr: 4-Bromofluorobenzene</i>	44.19	0	50	0	88.4	61-131
<i>Surr: Dibromofluoromethane</i>	48.72	0	50	0	97.4	87-126
<i>Surr: Toluene-d8</i>	49.16	0	50	0	98.3	84-111

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92616**      Instrument ID **VMS1**      Method: **SW8260**

LCS	Sample ID: <b>LCS-R92616</b>	Units: <b>µg/L</b>				Analysis Date: <b>7/24/2012 11:56 AM</b>				
Client ID:	Run ID: <b>VMS1_120724A</b>	SeqNo: <b>471640</b>				Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.06	5.0	50	0	100	48.4-140		0		
1,1-Dichloroethene	51.17	5.0	50	0	102	45.5-150		0		
1,2-Dichloroethane	50.68	5.0	50	0	101	46.5-141		0		
1,3-Dichlorobenzene	47.43	5.0	50	0	94.9	42.5-133		0		
1,4-Dichlorobenzene	45.56	5.0	50	0	91.1	38.9-136		0		
Benzene	49.3	5.0	50	0	98.6	50.7-134		0		
Carbon tetrachloride	49.57	5.0	50	0	99.1	45.5-143		0		
Chlorobenzene	49.12	5.0	50	0	98.2	45-133		0		
Chloroform	50.19	5.0	50	0	100	52.4-136		0		
cis-1,2-Dichloroethene	51.22	5.0	50	0	102	49.7-138		0		
Ethylbenzene	48.44	5.0	50	0	96.9	37.8-145		0		
m,p-Xylene	102.6	5.0	100	0	103	25.1-163		0		
o-Xylene	51.83	5.0	50	0	104	50.2-128		0		
Styrene	56.19	5.0	50	0	112	26.3-172		0		
Tetrachloroethene	48.03	5.0	50	0	96.1	37.3-139		0		
Toluene	47.98	5.0	50	0	96	44-135		0		
Trichloroethene	49.89	5.0	50	0	99.8	46.9-134		0		
Xylenes, Total	154.4	5.0	150	0	103	47.3-132		0		
Surr: 4-Bromofluorobenzene	45.18	0	50	0	90.4	61-131		0		
Surr: Dibromofluoromethane	50.5	0	50	0	101	87-126		0		
Surr: Toluene-d8	50.05	0	50	0	100	84-111		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92616**      Instrument ID **VMS1**      Method: **SW8260**

MS	Sample ID: <b>1207267-03A MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>7/24/2012 12:56 PM</b>			
Client ID:	Run ID: <b>VMS1_120724A</b>			SeqNo: <b>471642</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.56	5.0	50	0	99.1	47.4-141		0		
1,1-Dichloroethene	50.29	5.0	50	0	101	56.3-140		0		
1,2-Dichloroethane	49.86	5.0	50	0	99.7	50.1-139		0		
1,3-Dichlorobenzene	45.5	5.0	50	0	91	53-127		0		
1,4-Dichlorobenzene	44.47	5.0	50	0	88.9	53.4-129		0		
Benzene	48.78	5.0	50	0	97.6	52.8-136		0		
Carbon tetrachloride	49.59	5.0	50	0	99.2	48.1-141		0		
Chlorobenzene	47.34	5.0	50	0	94.7	52.4-132		0		
Chloroform	50.17	5.0	50	0	100	52.9-136		0		
cis-1,2-Dichloroethene	50.84	5.0	50	0	102	63.5-128		0		
Ethylbenzene	47.77	5.0	50	0	95.5	46.5-146		0		
m,p-Xylene	100.8	5.0	100	0	101	38.2-167		0		
o-Xylene	50.39	5.0	50	0	101	57.3-121		0		
Styrene	53.88	5.0	50	0	108	20.9-184		0		
Tetrachloroethene	47.59	5.0	50	0	95.2	55.2-134		0		
Toluene	47.11	5.0	50	0	94.2	45.1-138		0		
Trichloroethene	48.72	5.0	50	0	97.4	52.8-133		0		
Xylenes, Total	151.2	5.0	150	0	101	57.9-115		0		
Surr: 4-Bromofluorobenzene	44.38	0	50	0	88.8	61-131		0		
Surr: Dibromofluoromethane	50.09	0	50	0	100	87-126		0		
Surr: Toluene-d8	49.49	0	50	0	99	84-111		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Work Order:** 1207300  
**Project:** Barret Paving; Project No.: 063207.08

## QC BATCH REPORT

Batch ID: **R92616**      Instrument ID **VMS1**      Method: **SW8260**

MSD	Sample ID: <b>1207267-03A MSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>7/24/2012 01:56 PM</b>			
Client ID:	Run ID: <b>VMS1_120724A</b>			SeqNo: <b>471757</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.6	5.0	50	0	97.2	47.4-141	49.56	1.96	20	
1,1-Dichloroethene	47.09	5.0	50	0	94.2	56.3-140	50.29	6.57	20	
1,2-Dichloroethane	48.33	5.0	50	0	96.7	50.1-139	49.86	3.12	20	
1,3-Dichlorobenzene	43.01	5.0	50	0	86	53-127	45.5	5.63	20	
1,4-Dichlorobenzene	42.08	5.0	50	0	84.2	53.4-129	44.47	5.52	20	
Benzene	46.74	5.0	50	0	93.5	52.8-136	48.78	4.27	20	
Carbon tetrachloride	48.38	5.0	50	0	96.8	48.1-141	49.59	2.47	20	
Chlorobenzene	45.92	5.0	50	0	91.8	52.4-132	47.34	3.05	20	
Chloroform	48.53	5.0	50	0	97.1	52.9-136	50.17	3.32	20	
cis-1,2-Dichloroethene	48.41	5.0	50	0	96.8	63.5-128	50.84	4.9	20	
Ethylbenzene	46.08	5.0	50	0	92.2	46.5-146	47.77	3.6	20	
m,p-Xylene	94.17	5.0	100	0	94.2	38.2-167	100.8	6.78	20	
o-Xylene	47.81	5.0	50	0	95.6	57.3-121	50.39	5.25	20	
Styrene	45.76	5.0	50	0	91.5	20.9-184	53.88	16.3	20	
Tetrachloroethene	44.97	5.0	50	0	89.9	55.2-134	47.59	5.66	20	
Toluene	45.55	5.0	50	0	91.1	45.1-138	47.11	3.37	20	
Trichloroethene	47.97	5.0	50	0	95.9	52.8-133	48.72	1.55	20	
Xylenes, Total	142	5.0	150	0	94.7	57.9-115	151.2	6.27	20	
Surr: 4-Bromofluorobenzene	44.88	0	50	0	89.8	61-131	44.38	1.12		
Surr: Dibromofluoromethane	50	0	50	0	100	87-126	50.09	0.18		
Surr: Toluene-d8	49.06	0	50	0	98.1	84-111	49.49	0.873		

The following samples were analyzed in this batch:

1207300-10A      1207300-11A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Soil and Materials Engineers  
**Project:** Barret Paving; Project No.: 063207.08  
**WorkOrder:** 1207300

**QUALIFIERS,  
ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% of sample	
µg/Kg-dry	
µg/L	
µg/m <sup>3</sup>	
mg/Kg-dry	
ppbv	

# ALS Environmental

## Sample Receipt Checklist

Client Name: **SOIL&MATERIALS-CINCINNATI**

Date/Time Received: **13-Jul-12 14:16**

Work Order: **1207300**

Received by: **JNW**

Checklist completed by **Jan Wilcox**

eSignature

16-Jul-12

Date

Reviewed by: **Alexis Wilsey**

eSignature

16-Jul-12

Date

Matrices:

Carrier name: **Client**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Temperature(s)/Thermometer(s):

3.2

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes  No  No VOA vials submitted

Water - pH acceptable upon receipt?

Yes  No  N/A

pH adjusted?

Yes  No  N/A

pH adjusted by:

-

Login Notes: See emails for sample labeling corrections.

-----  
Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



## Field Chain-of-Custody Record

Page 1 of 2  
Cooler Temp: 32  
(Lab only)

13939

1207300

 REGULAR Status     RUSH Status
Date 7/12/12 Purchase Order No. 063207,08

Billing Address (if different)

Company Name SMEAddress 5815 N Commerce Park Dr, Ste 113  
Lockland OH 45215City  State  Zip Person to Contact Keith EganProject No. 063207,08Email Address egan@smes-usa.comSampling Site Barrett PavingTelephone ( ) 513 318 8918Date/Time of Collection 7-12-12 0820Fax Telephone ( ) 513 898 9474VAP  Yes  No

Sample Number	Site ID	Date	Time	Lab Sample Number	Preservation	Analysis Requested						No. of Containers
						VOC's	PAH's	TPH GRO	TPH-DRC	-ERO	TOL	
1	IA-1	7/12/12	0820	01	-	air					/	1
2	OA-1	7/12/12	0825	02	-	air					/	1
3	SB1 2-3	7/12/12	1600	03	ice	S	/ /	/ /	/ /	/ /	/ /	3
4	SB2 2-4	7/12/12	1445	04			/ /	/ /	/ /	/ /	/ /	3
5	SB3 2-4	7/12/12	1505	05			/ /	/ /	/ /	/ /	/ /	3
6	SB4 2-4	7/12/12	1550	06			/ /	/ /	/ /	/ /	/ /	3
7	SB5 1.5-3.5	7/12/12	1615	07			/ /	/ /	/ /	/ /	/ /	3
8	MW3 14-16	7/12/12	0950	08	↓	↓	/ /	/ /	/ /	/ /	/ /	3
9	MW1 2-4	7/12/12	1130	09	↓	↓	/ /	/ /	/ /	/ /	/ /	2
10	DVP/L	7/13/12	-	10	Y	GW					/ /	3

Notes:

VAP samples, Dry weight corrected

MUST have results no later than 12:00 pm 7-27-12

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Relinquished by:  
(Signature) Steve BravottaTime / Date  
1416  
7-13-12Received by:  
(Signature)Up ALSTime / Date  
7/13/12  
1416Relinquished by:  
(Signature)

Time / Date

Received by:  
(Signature)

Time / Date

Relinquished by:  
(Signature)

Time / Date

Received by:  
(Signature)

Time / Date

Ship to: **ALS Environmental**  
4388 Glendale - Milford Road  
Cincinnati, Ohio 45242Phone: 513.733.5336  
Fax: 513.733.5347

Carrier / Airbill #

Date / Time:

**VAP**



1207306

## Field Chain-of-Custody Record

Page 2 of 2  
Cooler Temp: 312  
(Lab only)

13941

Date <u>7/13/12</u>	Purchase Order No. <u>063207.08</u>	Billing Address (if different)	Analysis Requested						
Company Name <u>SME</u>									
Address <u>1 N commerce park Dr Ste 113</u>									
<u>Lockland</u>	<u>OH</u>	<u>45215</u>							
City	State	Zip							
Person to Contact <u>Keith Egan</u>	Project No. <u>063207.08</u>								
Email Address <u>egan@SME-usa.com</u>	Sampling Site <u>Barrett Pavilions</u>								
Telephone ( ) <u>513 319 8918</u>	Date/Time of Collection <u>7-13-12 0845</u>								
Fax Telephone ( ) <u>513 898 9474</u>	VAP <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
Sample Number	Site ID	Date	Time	Lab Sample Number	Preservation	Sample Type	No. of Containers		
11	MW 1	7-13-12	1000	11	4	GW	/	/	3
12	MW 2	7-13-12	0845	12	4	↓	/	/	3
13	MW 3	7-13-12	0930	13	4	↓	/	/	3
14	Trip Blank	-	-	14		/			1
Notes: VAP Samples, dry weight corrected									
MUST have results no later than 12:00pm 7-27-12									

**Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.**

Relinquished by: (Signature) <i>Steve Ray</i>	Time / Date 1916 7-13-12	Received by: (Signature) <i>W. A. S.</i>	Time / Date 7/13/12 1414	Ship to: <b>ALS Environmental</b> 4388 Glendale - Milford Road Cincinnati, Ohio 45242 Phone: 513.733.5336 Fax: 513.733.5347
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date	Carrier / Airbill #
Relinquished by: (Signature)	Time / Date	Received by: (Signature)	Time / Date	Date / Time: